

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
CENTRAL DISTRICT OFFICE
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605

Date: NOV 08 1990

Subject: TSP Compliance Inspection, Chemetco Foundry, Hartford, Illinois
(2-70-90)(AFH114:A6)

From: *John J. Mc Guire*
John J. Mc Guire, Environmental Engineer,
Central District Office(5SCD0)

To: Larry Kertcher, Chief
Air Compliance Branch (5ACB)

ATTN: Sharon Freeman (5ACB)

THRU: *Willie H. Harris*
Willie H. Harris, Chief
Central District Office (5SCD0)

INTRODUCTION

In response to Mr. John T. Gaitskill's request dated July 27, 1990, I visited the subject facility on November 1, 1990, to conduct an inspection related to TSP Compliance. Specifically, the request was to: (1) observe and record visible emissions for one hour from the roof monitor; (2) observe and record visible emissions for one hour from each of the stacks; (3) verify furnace charging schedule; and (4) check the progress of the installation of air pollution control equipment. Mr. Mark C. Schlueter, Environmental Protection Engineer, of the Illinois Environmental Protection Agency (IEPA) met me at the facility after I completed the Visible Emissions observations. The facility was represented by Mrs. Michelle L. Resnack, Environmental Manager.

FACILITY DESCRIPTION

The Chemetco facility in Hartford, Illinois is a secondary copper smelter with a SIC code of 3341 (Secondary Smelting and Refining of Nonferrous Metals). The facility operates four furnaces. Emissions from each furnace are controlled by separate scrubbers. A small bag house was used to control fugitive emissions from within the furnace building. A larger baghouse and new duct system was being installed to control fugitive emissions that are emitted from the roof monitor.

OFF-SITE OBSERVATION - PRIOR TO PLANT NOTIFICATION

Method 9 visible emissions observations were made of the roof monitor at the same location where past inspection were conducted. This location was off Old Alton Road on Oldenberg Road but east of gate. There was a no trespassing sign around this location. Chemetco is west of this location. At approximately 8:50am security personnel from Chemetco informed me that I was on the companies property. I informed them that I was with the USEPA, that I was taking Visible Emissions observations, and that I was outside of the company's gate. They stated that the company owned all land to the west of Old Alton Road. They called Mrs Resnack from there vehicle and she requested that I come to her office. At 8:57am I stop my observation of the roof monitor and went into the facility. I informed Mrs. Resnack of the inspection and then went back to the same location and continued to take visible emission observations.

Roof Monitor

Emissions were observed exiting the roof below the duct runs the length of the building. The emissions were read after the plume had risen above the duct and the sky was used as a background. The observations were taken formally for 35 minute (8:22 a.m. to 8:57 a.m.). Emissions ranged from 0% to 55%. The highest six minute average was 19.1% opacity. There were six reading greater than 30% but less then 60%. There were no readings greater than 60%.

While observing scrubber stacks emissions the roof monitor emissions ranged from 0% to 30%.

Scrubber Stacks

Method 9 visible emission readings were taken of scrubber stack #4 for 60 minutes (9:26 a.m. to 10:26 a.m.) after notifying the facility. Emissions were read two to three stack diameters from the stack after steam had dissipated. Emissions ranged from 0% to 100%. The highest six minute average was 32.9%. There were 36 readings greater than 30% but less than 60% and 5 readings greater than 60%.

While observing the roof monitor a black plume was observed from stack #4 at 8:29. This plum lasted for 2 minutes and ranged in opacity from 70% to 100%.

When scrubber stack #4 was emitting smoke the wind, which was from the south, prevented the observation of stacks # 1, 2 and 3. When emissions from stack #4 were 0, no emissions were seen from stacks 1, 2, and 3.

Other Observations

At approximately 10:30 a.m. I enter the facility and met with Michelle Resnack of Chemetco and Mark Schlueter of IEPA. The faciliy was operating normally. Mrs. Resnack stated that work was continuing on the installation of the baghouse that will control roof monitor emissions. A used baghouse was bought from Homestead steel. The unit is a Wheelab-rator Jet II positive pressure baghouse. The installation of the

baghouse was complete. Work was continuing to finish the installation of roof sheeting, dividing walls, and fans. The system is expected to be operational by November 15, 1990. A stack test of the unit will be preformed within 60 days after start-up. This test is tentatively schedule for early January 1991.

All visible emissions readings, summary sheets, Chemetco Charging Schedule, and the State Notification sheet are attached. If you have any questions, please call me at (312) 353-2704.

Attachments

WORKSTATION 194 - USER MLR - REZNACK, MICHELLE 219CRE

3:13:19 PM THURSDAY NOVEMBER 1, 1990

***** 1 2 3 4 5 6 7 8 *****
***** 123456789012345678901234567890123456789012345678901234567890 *****

EVENT SUMMARY

| | 11/01 | HEAT | TYP | 4 | 2 | 1 | 3 |
|-----|-------|------|-----|---|---|---|---|
| 1* | | | | | | | |
| 2* | | | | | | | |
| 3* | | | | | | | |
| 4* | | | | | | | |
| 5* | 6:40 | 479 | REF | | | | |
| 6* | 6:40 | 270 | BRZ | | | | |
| 7* | 6:45 | 271 | SME | | | | |
| 8* | 7:20 | 479 | REF | | | | |
| 9* | 7:20 | 118 | SME | | | | |
| 10* | 7:30 | 479 | REF | | | | |
| 1* | 7:33 | 118 | SME | | | | |
| 2* | 7:34 | 118 | SME | | | | |
| 3* | 7:35 | 119 | REF | | | | |
| 4* | 7:35 | 214 | BRZ | | | | |
| 5* | 7:35 | 214 | BRZ | | | | |
| 6* | 8:00 | 271 | SME | | | | |
| 7* | 8:00 | 214 | BRZ | | | | |
| 8* | 8:15 | 272 | SME | | | | |
| 9* | 8:25 | 272 | SME | | | | |
| 20* | 8:30 | 214 | BRZ | | | | |
| 1* | 8:45 | 479 | SME | | | | |
| 2* | 8:55 | 479 | SME | | | | |

FOR DETAIL

PF4 - FCE 4 PF2 - FCE 2 PF1 - FCE 1 PF3 - FCE 3

***** 1 2 3 4 5 6 7 8 *****
***** 123456789012345678901234567890123456789012345678901234567890 *****

WORKSTATION 194 - USER MLR - REZNACK, MICHELLE 219CRE

3:13:31 PM THURSDAY NOVEMBER 1, 1990

***** 1 *****
***** 123456789012345678901234567890123456789012345678901234567890 *****

EVENT SUMMARY

| | 11/01 | HEAT | TYP | 4 | 2 | 1 | 3 | |
|-----|-------|------|-----|---|---|---|---|--|
| 1* | | | | | | | | |
| 2* | | | | | | | | |
| 3* | | | | | | | | |
| 4* | | | | | | | | |
| 5* | 8:55 | 479 | SME | | | | | |
| 6* | 9:10 | 272 | SME | | | | | |
| 7* | 9:15 | 479 | SME | | | | | |
| 8* | 9:30 | 214 | BRZ | | | | | |
| 9* | 9:35 | 479 | SME | | | | | |
| 10* | 9:40 | 119 | REF | | | | | |
| 1* | 9:45 | 119 | REF | | | | | |
| 2* | 9:45 | 214 | BRZ | | | | | |
| 3* | 9:55 | 119 | REF | | | | | |
| 4* | 10:00 | 119 | REF | | | | | |
| 5* | 10:05 | 272 | SME | | | | | |
| 6* | 10:15 | 273 | BRZ | | | | | |
| 7* | 10:25 | 214 | BRZ | | | | | |
| 8* | 10:45 | 119 | REF | | | | | |
| 9* | 11:05 | 214 | BRZ | | | | | |
| 20* | 11:10 | 119 | REF | | | | | |
| 1* | 11:10 | 215 | SME | | | | | |
| 2* | 11:20 | 119 | REF | | | | | |
| 3* | | | | | | | | |
| 4* | | | | | | | | |

FOR DETAIL

PF4 - FCE 4 PF2 - FCE 2 PF1 - FCE 1 PF3 - FCE 3

***** 1 *****
***** 123456789012345678901234567890123456789012345678901234567890 *****

SUMMARY OF VISIBLE EMISSION OBSERVATIONS - USEPA, REGION V

Source Identification

Facility: Chemetco, Hartford, IL

Source: Roof Monitor

Regulation: Illinois 202(b)

Evaluator's Report

On November 1, 1990, visible emission evaluation began at 8:22, and continued for 35 minutes.

SUMMARY OF READINGS

| Set Number | Time Start-End CST | Opacity Average | Readings | |
|------------|--------------------------|--------------------|-------------|------|
| | | | >30% to 60% | >60% |
| 1 | 8:22 - 8:28 | 0 | 0 | 0 |
| 2 | 8:28 - 8:34 | 2.1 | 0 | 0 |
| 3 | 8:34 - 8:40 | 12.1 | 3 | 0 |
| 4 | 8:40 - 8:46 | 19.6 | 3 | 0 |
| 5 | 8:46 - 8:52 | 6.0 | 0 | 0 |
| 6 | 8:52 - 8:59 | 6.0 | 0 | 0 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Readings ranged from 0 to 55 % opacity.

Meteorological Conditions: Cloud Cover .

Ambient Temperature 60-62 °F.

Evaluation Conditions: Excellent Good ✓ Fair

Name and qualification of expert witness to attest to above:

Signature:

Name: John McGuire

Title: Environmental Engineer

Office: CDO

Date of Last Certification: Oct. 4, 1990

Initials of person who summarized data: JPM

VISIBLE EMISSIONS EVALUATION FORM - USEPA REGION V

Facility Chemtec

Date: 11/1/90

Observer: John McGuire

Hartford, IL

Source: Secondary Copper
Smelter Roof Monitor
Emissions

Observation Point: Near gate off
of Oldenberg Road (property line)

Distance From: 400 Yards

Direction From: S.E.

Source Height: 80ft

| | Initial | Final |
|------------------------|---------------------|---------------------|
| Wind Direction | <u>SSW</u> | <u>SSW</u> |
| Wind Speed | <u>10-15</u> | <u>10-15</u> |
| Sky Condition | <u>mostly Sunny</u> | <u>mostly Sunny</u> |
| Background | <u>SKY</u> | <u>SKY</u> |
| Ambient Temperature °F | <u>60°F</u> | <u>62°F</u> |
| Humidity (high-low) | <u>low</u> | <u>low</u> |
| Color of Emissions | <u>white</u> | <u>white</u> |
| Reading Conditions | <u>Good</u> | <u>Good</u> |

Plant Representatives: None

State/Local Agency Representatives:

None

Observation:

Began 8:22 AM Ended 8:56 AM
(CST)

Remarks: 8:29 Dark Plume from Stack #4
fasted 2 min. (70-100%)

5142 Emissions from wall at north
end of building

| Sec Min | 0 | 15 | 30 | 45 | Comments | Sec Min | 0 | 15 | 30 | 45 | Comment |
|------------|----|----|----|----|-----------------|------------|----|----|----|----|---|
| 0 | 0 | 0 | 0 | 0 | | 30 | 10 | 15 | 10 | 0 | white |
| 1 | 0 | 0 | 0 | 0 | | 31 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | | 32 | 10 | 10 | 15 | 20 | |
| 3 | 0 | 0 | 0 | 0 | | 33 | 10 | 0 | 0 | 10 | |
| 4 | 0 | 0 | 0 | 0 | | 34 | 10 | 0 | 0 | 0 | Gards ^{removed} that I ^{was} ⁱⁿ ^{Russia} |
| 5 | 0 | 0 | 0 | 0 | | 35 | | | | | |
| 6 | 0 | 0 | 0 | 15 | white north | 36 | | | | | |
| 7 | 15 | 10 | 0 | 0 | | 37 | | | | | |
| 8 | 10 | 0 | 0 | 0 | | 38 | | | | | |
| 9 | 0 | 0 | 0 | 0 | | 39 | | | | | |
| 10 | 0 | 0 | 0 | 0 | | 40 | | | | | |
| 11 | 0 | 0 | 0 | 0 | | 41 | | | | | |
| 12 | 0 | 0 | 10 | 10 | white north | 42 | | | | | |
| 13 | 15 | 15 | 15 | 10 | | 43 | | | | | |
| 14 | 10 | 10 | 10 | 15 | | 44 | | | | | |
| 15 | 10 | 10 | 10 | 0 | | 45 | | | | | |
| 16 | 0 | 0 | 0 | 0 | | 46 | | | | | |
| 17 | 30 | 35 | 45 | 50 | white south mid | 47 | | | | | |
| 18 | 55 | 35 | 35 | 20 | | 48 | | | | | |
| 19 | 20 | 15 | 25 | 30 | | 49 | | | | | |
| 20 | 30 | 20 | 15 | 20 | | 50 | | | | | |
| 21 | 20 | 15 | 30 | 10 | | 51 | | | | | |
| 22 | 10 | 10 | 20 | 15 | black-s | 52 | | | | | |
| 23 | 0 | 0 | 15 | 5 | white n | 53 | | | | | |
| 24 | 10 | 0 | 10 | 0 | | 54 | | | | | |
| 25 | 0 | 10 | 10 | 10 | | 55 | | | | | |
| 26 | 10 | 10 | 10 | 0 | | 56 | | | | | |
| 27 | 0 | 0 | 0 | 0 | | 57 | | | | | |
| 28 | 0 | 15 | 10 | 10 | white | 58 | | | | | |
| 29 | 0 | 10 | 10 | 10 | | 59 | | | | | |

Observer's Signature

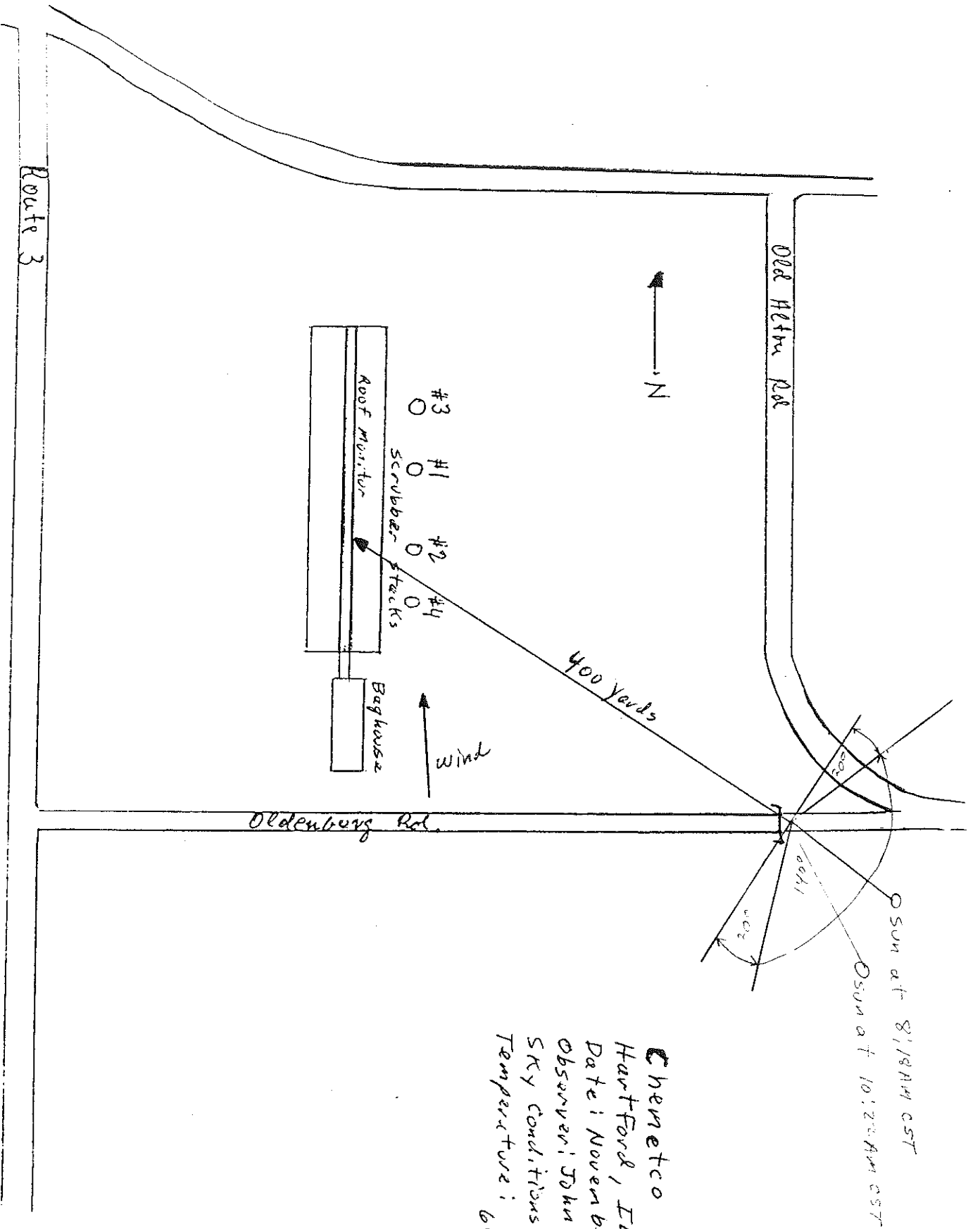
John McGuire

Last Certification Date

10-4-90

Observer's Affiliation

USEPA



Chenecto
 Hartford, IL
 Date: November 1, 1980
 Observer: John McGuire
 Sky conditions: Mostly
 Sunny
 Temperature: 60°F to 62°F

SUMMARY OF VISIBLE EMISSION OBSERVATIONS - USEPA, REGION V

Source Identification

Facility: Chemetco, Hartford, IL

Source: Scrubber Stack #4

Regulation: Illinois 202(b)

Evaluator's Report

On November 1, 1990, visible emission evaluation began at 9:26 AM, and continued for 60 minutes.

SUMMARY OF READINGS

| Set Number | Time Start-End CST | Opacity Average | Readings | |
|------------|--------------------------|--------------------|-------------|------|
| | | | >30% to 60% | >60% |
| 1 | 9:26 - 9:32 | 0 | 0 | 0 |
| 2 | 9:32 - 9:38 | 10.8 | 0 | 0 |
| 3 | 9:38 - 9:44 | 12.9 | 0 | 0 |
| 4 | 9:44 - 9:50 | 24.6 | 2 | 5 |
| 5 | 9:50 - 9:56 | 8.8 | 0 | 0 |
| 6 | 9:56 - 10:02 | 31.3 | 9 | 0 |
| 7 | 10:02 - 10:08 | 30.8 | 7 | 0 |
| 8 | 10:08 - 10:14 | 32.9 | 13 | 0 |
| 9 | 10:14 - 10:20 | 21.5 | 3 | 0 |
| 10 | 10:20 - 10:26 | 10.0 | 0 | 0 |

Readings ranged from 0 to 100 % opacity.

Meteorological Conditions: Cloud Cover 0%.

Ambient Temperature 65-72 °F.

Evaluation Conditions: Excellent _____ Good ☒ Fair _____

Name and qualification of expert witness to attest to above:

Signature: John McGuire
 Name: John McGuire
 Title: Environmental Engineer
 Office: CDO

Date of Last Certification: Oct. 4, 1990

Initials of person who summarized data: JFM

VISIBLE EMISSIONS EVALUATION FORM - USEPA REGION V

Date: 11/1/90
 Observer: John McGuire

Facility Chemetco

Hartford, IL

Source: Scrubber Stack #4

Observation Point: Near gate off
Oldenberg Road

Distance From: 400 yd
 Direction From: SE
 Source Height: 100 ft

| | Initial | Final |
|------------------------|------------------|------------------|
| Wind Direction | <u>SSE</u> | <u>SSE</u> |
| Wind Speed | <u>10-15 mph</u> | <u>10-15 mph</u> |
| Sky Condition | <u>Clear</u> | <u>Clear</u> |
| Background | <u>Sky</u> | <u>Sky</u> |
| Ambient Temperature °F | <u>65°F</u> | <u>72°F</u> |
| Humidity (high-low) | <u>Low</u> | <u>100%</u> |
| Color of Emissions | <u>White/Blk</u> | <u>White/</u> |
| Reading Conditions | <u>Good</u> | <u>Good</u> |

Plant Representatives: None

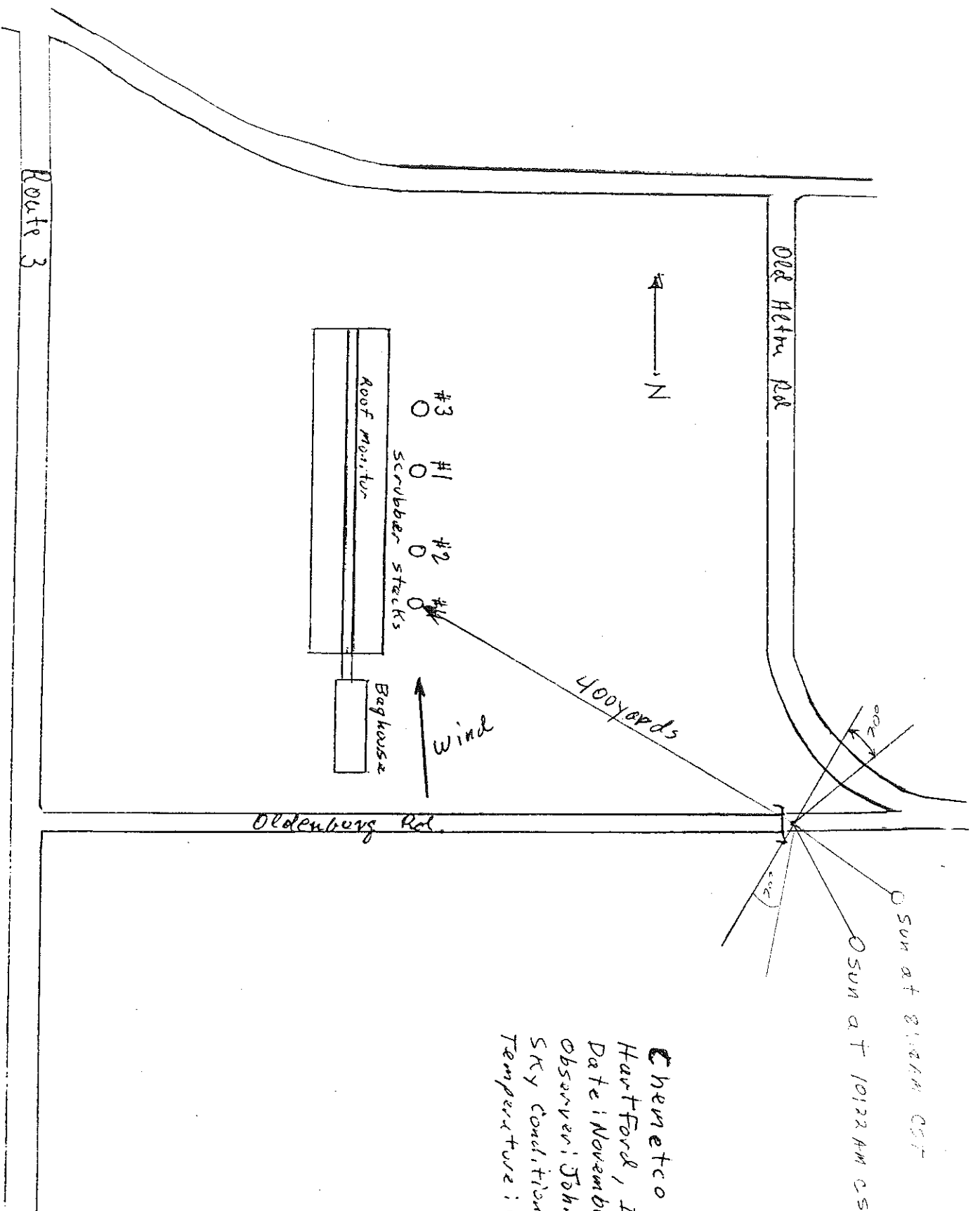
State/Local Agency Representatives:
None

Observation:
 Began 9:26 AM Ended 10:26 AM
 (EST)

Remarks: Plume from stack 4 observed
other stack when black smoke was emitted
No emissions from stacks 1-3 when 4 was not emitting
Roof Monitor Emissions ranged from
0-30

| Sec Min | 0 | 15 | 30 | 45 | Comments | Sec Min | 0 | 15 | 30 | 45 | Comment |
|------------|----|-----|-----|-----|----------|------------|----|----|----|----|---------|
| 0 | 0 | 0 | 0 | 0 | | 30 | 35 | 30 | 30 | 35 | white |
| 1 | 0 | 0 | 0 | 0 | | 31 | 30 | 25 | 30 | 25 | |
| 2 | 0 | 0 | 0 | 0 | | 32 | 25 | 35 | 30 | 35 | |
| 3 | 0 | 0 | 0 | 0 | | 33 | 35 | 30 | 30 | 35 | |
| 4 | 0 | 0 | 0 | 0 | | 34 | 30 | 30 | 30 | 35 | |
| 5 | 0 | 0 | 0 | 0 | | 35 | 30 | 30 | 35 | 35 | |
| 6 | 0 | 0 | 0 | 0 | | 36 | 30 | 30 | 25 | 30 | |
| 7 | 0 | 0 | 0 | 0 | | 37 | 35 | 35 | 35 | 35 | |
| 8 | 0 | 0 | 10 | 10 | white | 38 | 35 | 30 | 30 | 30 | |
| 9 | 15 | 10 | 20 | 20 | | 39 | 30 | 30 | 30 | 30 | |
| 10 | 20 | 25 | 25 | 20 | | 40 | 30 | 30 | 30 | 30 | |
| 11 | 20 | 20 | 25 | 20 | | 41 | 35 | 35 | 25 | 25 | |
| 12 | 20 | 20 | 20 | 10 | | 42 | 30 | 35 | 30 | 35 | |
| 13 | 15 | 15 | 15 | 20 | | 43 | 30 | 30 | 35 | 30 | |
| 14 | 20 | 25 | 25 | 25 | | 44 | 30 | 35 | 35 | 35 | |
| 15 | 20 | 10 | 15 | 15 | | 45 | 35 | 35 | 30 | 35 | |
| 16 | 10 | 10 | 0 | 0 | | 46 | 35 | 30 | 30 | 30 | |
| 17 | 0 | 0 | 0 | 0 | | 47 | 30 | 35 | 35 | 40 | |
| 18 | 0 | 0 | 0 | 0 | | 48 | 30 | 30 | 30 | 35 | |
| 19 | 0 | 0 | 0 | 0 | | 49 | 35 | 35 | 30 | 30 | |
| 20 | 0 | 0 | 0 | 0 | | 50 | 30 | 30 | 30 | 30 | |
| 21 | 0 | 100 | 100 | 100 | Black | 51 | 30 | 25 | 25 | 20 | |
| 22 | 50 | 75 | 85 | 45 | | 52 | 20 | 10 | 10 | 0 | |
| 23 | 20 | 15 | 0 | 0 | | 53 | 0 | 0 | 0 | 0 | |
| 24 | 0 | 0 | 0 | 0 | | 54 | 0 | 0 | 0 | 0 | |
| 25 | 0 | 0 | 0 | 0 | | 55 | 0 | 0 | 0 | 0 | |
| 26 | 0 | 0 | 0 | 0 | | 56 | 0 | 0 | 0 | 0 | |
| 27 | 0 | 10 | 10 | 10 | white | 57 | 0 | 10 | 20 | 20 | white |
| 28 | 20 | 20 | 25 | 25 | | 58 | 30 | 30 | 30 | 20 | |
| 29 | 15 | 20 | 25 | 30 | | 59 | 30 | 20 | 15 | 15 | |

Observer's Signature John McGuire
 Last Certification Date 10-4-90
 Observer's Affiliation USEPA



Chemeco
 Hartford, IL
 Date: November 1, 1990
 Observer: John McGuire
 Sky conditions: clear
 Temperature: 65°F - 72°F

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION V

DISTRICT OFFICE

STATE NOTIFICATION OF INSPECTION

Authority: SECTION 114(d)(1)-CLEAN AIR ACT, AS AMENDED

☒ CWA, ☐ TSCA, ☐ RCRA, ☐ SWDA

Source Name Chemetco

Address _____

City Hartford, IL

State IL

Person Notified John Justice 618-346-5770

Title (Secretary to John Justice)

Organization IEPA

Date of Notification 10/26/90

Planned Date of Inspection 11/1/90

Purpose of Inspection (compliance monitoring, Enforcement Division request etc.)

VE

Scope VE

Person Giving Notice John M. ...

Title Environmental Engineer

Organization CDI

John M. ...
(signature)
CDI

(organization)

Name of Source: chemetco

Observer: john mcquire

File Name: chmtco

Start Time: 0926

Stop Time: 1026

Date of Test: 11-01-1990

- TIME AGGREGATION -

| Sec>> | 00 | 15 | 30 | 45 |
|-------|----|-----|-----|-----|
| Min | | | | |
| 1 | - | - | - | - |
| 2 | - | - | - | - |
| 3 | - | - | - | - |
| 4 | - | - | - | - |
| 5 | - | - | - | - |
| 6 | - | - | - | - |
| 7 | - | - | - | - |
| 8 | - | - | - | - |
| 9 | - | - | - | - |
| 10 | - | - | - | - |
| 11 | - | - | - | - |
| 12 | - | - | - | - |
| 13 | - | - | - | - |
| 14 | - | - | - | - |
| 15 | - | - | - | - |
| 16 | - | - | - | - |
| 17 | - | - | - | - |
| 18 | - | - | - | - |
| 19 | - | - | - | - |
| 20 | - | - | - | - |
| 21 | - | - | - | - |
| 22 | - | 100 | 100 | 100 |
| 23 | 50 | 75 | 85 | 45 |
| 24 | - | - | - | - |
| 25 | - | - | - | - |
| 26 | - | - | - | - |
| 27 | - | - | - | - |
| 28 | - | - | - | - |
| 29 | - | - | - | - |
| 30 | - | - | - | - |

| Sec>> | 00 | 15 | 30 | 45 |
|-------|----|----|----|----|
| Min | | | | |
| 31 | 35 | - | - | 35 |
| 32 | - | - | - | - |
| 33 | - | 35 | - | 35 |
| 34 | 35 | - | - | 35 |
| 35 | - | - | - | 35 |
| 36 | - | - | 35 | 35 |
| 37 | - | - | - | - |
| 38 | 35 | 35 | 35 | 35 |
| 39 | 35 | - | - | - |
| 40 | - | - | - | - |
| 41 | - | - | - | - |
| 42 | 35 | 35 | - | - |
| 43 | - | 35 | - | 35 |
| 44 | - | - | 35 | - |
| 45 | - | 35 | 35 | 35 |
| 46 | 35 | 35 | - | 35 |
| 47 | 35 | - | - | - |
| 48 | - | 35 | 35 | 40 |
| 49 | - | - | - | 35 |
| 50 | 35 | 35 | - | - |
| 51 | - | - | - | - |
| 52 | - | - | - | - |
| 53 | - | - | - | - |
| 54 | - | - | - | - |
| 55 | - | - | - | - |
| 56 | - | - | - | - |
| 57 | - | - | - | - |
| 58 | - | - | - | - |
| 59 | - | - | - | - |
| 60 | - | - | - | - |

- The total time that the data is just GREATER than the given value of: 30 % Opacity is: 9.75 Minutes.

>> OPERATION WAS PERFORMED ON THE: original DATA. <<

NOTE: violation is 1.75 minutes for opacities > 60%
time between 30 & 60 was 8 minutes which is
example

DATE PRINT: 01-01-1980

TIME PRINT: 00:03:29

Kendall

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: JUL 11 1991

SUBJECT: Chemetco Briefing of Lead Pollution Prevention
Inspection/Meeting

FROM: *Kendall*
Kendall Magnuson, Environmental Scientist
Enforcement Section

TO: Addressees

The inspection/meeting was conducted to discuss voluntary lead reductions as a pollution prevention measure. Chemetco is a secondary copper smelter using scrap brasses and bronzes as the charge and raw materials to produce an approximately 98.5% pure copper. The Environmental Manager is Michelle Reznack. We have set plans to arrive and meet with her and others from her department. There is the possibility that Jeff Benbeneck of IEPA, Region III in Collinsville, Illinois will attend with us. Discussions will center upon Chemetco's 4 top-blown rotary furnaces which are used in three modes of operation: smelting/slagging, refining, and melting. We will also touch upon any other points of lead emissions that become revealed to us when we learn more about the facility before and during the inspection/meeting. Ms. Reznack is currently preparing some information to be sent to us. The means by which Chemetco calculated its lead emissions is an issue to be clarified. We hope to observe the spectrum of the operation of the facility; from the receipt of raw materials to the storage of the final product.

June 30, 1988, Chemetco entered into a Consent Order with Illinois which stemmed from many violations of water, solid waste, and air regulations. The air violations were related to permitting of pollution control equipment and emission sources and opacity violations. The Consent Order stipulates limits of 20% opacity from scrubber stacks, roof monitors, any foundry openings, or any other emission points; and .022 gr/dscf for the concentration of particulate matter from any control device along with process weight rate dependent limitations in 35 IAC 212.321. Chemetco performed stack tests in February 1991. The results have not been received by IEPA, but indications are that Chemetco failed some parts.

Addressees

Diane Sipe
Gustavo Felix

standard bcc's: official file copy w/attachment(s)
originator's file copy w/attachment(s)
originating organization reading file w/attachment(s)

ARD:RDB:ES:MAGNUSON/nw:6-14-91 Diskette:G-Share Drive Saved: g:chemetco.kmm

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605

DATE: JUN 06 1990

SUBJECT: TSP Compliance Inspection, Chemetco Foundry, Hartford, Illinois
(4-2-90) (AFH114:E7)

FROM: Stephan Wynnychenko, Environmental Scientist *led*,
Central District Office (5SCD0)

TO: Larry F. Kertcher, Chief
Air Compliance Branch (5ACB)

ATTN: Sharon Freeman (5ACB)

THRU: Willie H. Harris, Chief *W.H.H.*
Central District Office (5SCD0)

INTRODUCTION

In response to Mr. John T. Gaitskill's request dated April 9, 1990, I visited the facility on May 22, 1990, to conduct the first of three requested inspections relative to the TSP Compliance Investigation. Specifically, the request was to: (1) observe and record visible emissions for one hour from the roof monitor; (2) observe and record visible emissions for one hour from each scrubber stack; (3) verify charging schedule; and (4) check progress of air pollution control equipment installation. The Illinois Environmental Protection Agency was notified of the time and date of this inspection, but did not participate. The facility was represented by Mrs. Michelle L. Reznack, Environmental Manager, of Chemetco.

FACILITY DESCRIPTION

Chemetco Foundry, SIC code # 3341, is a secondary smelting and refining of nonferrous metals. The Chemetco foundry facility operates four furnaces. Currently, the fugitive emissions from these furnaces are control by a small baghouse located east of the plant. Uncontrolled emissions from the furnace operations escape to the ambient air through the roof monitor. Also, each furnace is equipped with a scrubber. These scrubbers are employed to control zinc oxides during the process operations, but not fugitive particulate emissions. Each scrubber has its own stack. The plant operates 24 hrs/day, 7 days/week, and 158 people are employed.

OFF-SITE OBSERVATION - PRIOR TO PLANT NOTIFICATION

ROOF MONITOR

Method 9 visible emission readings were taken from the roof monitor for 60 minutes (9:10 a.m. to 10:10 a.m.) prior to plant notification. Emissions ranged from 0% to 100% opacity. The highest six minute average was 78.54%

opacity. There were 98 readings greater than 30% (up to 60%) opacity. There were 49 readings greater than 60%.

SCRUBBER STACKS

Method 9 visible emission readings were taken from #2 scrubber stack for 42 minutes (10:25 a.m. to 11:07 a.m.) prior to plant notification. Emissions ranged from 0% to 35% opacity. The highest six minute average was 17.5%. There were 2 readings greater than 30%.

Scrubber stacks #1 and #3 were observed informally for 110 minutes (9:10 a.m. to 11:00 a.m.) and the opacity was zero percent. Visible emission observations on the scrubber stack #4 were not taken due to wind direction. The plumes emanating from the scrubber #4 stack were mixing with the roof monitor emissions before the steam dissipated.

The weather condition during this inspection was partly cloudy. Humidity was low, wind was from North (Northwest) at 5 to 8 miles/hour, and the temperature was 60 to 65 deg F..

ON-SITE OBSERVATION

At approximately 1:30 a.m., I entered the facility and met with Mrs. Michelle L. Reznack, Environmental Manager. She explained that the plant was operating normally except for furnace #1. Furnace #1 was not operating and was down for bearing change. Also, she provided a computer printout which details the events that were occurring inside the plant at the time of this inspection (copy attached).

The facility is planning to install a new baghouse on the furnaces by July 1, 1990. At the time of this inspection the construction work for the new baghouse was completed and roof duct work was in progress to be installed. Mrs. Michelle Reznack explained that due to bad weather conditions the roof duct work is two weeks behind construction schedule time. Mrs. Reznack did not know the exact date when the entire construction on a new baghouse will be completed.

All visible emission readings, summary observations sheets, and State Notification sheet are attached.

If you have any questions regarding the inspection, please contact me at (312) 353-9153.

Attachments

VISIBLE EMISSIONS EVALUATION FORM - USEPA REGION V

Date: 5-22-90

Observer: S. WYNNYCHENKO

Facility: CHEMETCO

Hartford, Illinois

Source: Secondary Copper

SMELTER - Roof Monitor
Emissions

Observation Point: Near gate off
Oldenberg Road (property line)

Distance From: 400 yards

Direction From: SE

Source Height: 80 Ft.

| | Initial | Final |
|--|---------------------|-------|
| Wind Direction <u>NW</u> | <u>N</u> | |
| Wind Speed <u>5-9 mph</u> | | |
| Sky Condition <u>Partly Cloudy</u> | <u>Clear</u> | |
| Background <u>sky</u> | <u>sky</u> | |
| Ambient Temperature °F <u>60</u> | <u>65</u> | |
| Humidity (high-low) <u>low</u> | <u>Low</u> | |
| Color of Emissions <u>White (gray)</u> | <u>white (gray)</u> | |
| Reading Conditions <u>Good</u> | <u>Good</u> | |

Plant Representatives: None

State/Local Agency Representatives:

None

Observation

Began 9:10 a.m. Ended 10:10 a.m.
(IT)

Remarks:

W - white

G - gray to black

B - black

| Sec Min | 0 | 15 | 30 | 45 | Comments | Sec Min | 0 | 15 | 30 | 45 | Comments |
|------------|-----|-----|-----|-----|----------|------------|----|----|----|----|----------|
| 0 | 40 | 40 | 45 | 50 | W | 30 | 30 | 30 | 25 | 25 | G |
| 1 | 50 | 45 | 60 | 70 | W | 31 | 35 | 40 | 40 | 40 | G |
| 2 | 70 | 65 | 70 | 70 | W | 32 | 50 | 50 | 50 | 40 | G |
| 3 | 65 | 60 | 60 | 50 | W | 33 | 60 | 60 | 60 | 50 | G |
| 4 | 45 | 40 | 40 | 50 | W | 34 | 50 | 60 | 60 | 70 | G |
| 5 | 50 | 50 | 45 | 45 | W | 35 | 70 | 60 | 50 | 50 | W |
| 6 | 45 | 60 | 60 | 80 | G | 36 | 60 | 65 | 65 | 65 | W |
| 7 | 80 | 70 | 70 | 80 | G | 37 | 70 | 70 | 65 | 60 | W |
| 8 | 85 | 85 | 70 | 70 | G | 38 | 50 | 50 | 55 | 55 | W |
| 9 | 70 | 70 | 65 | 65 | W | 39 | 55 | 45 | 45 | 50 | W |
| 10 | 100 | 100 | 100 | 100 | G | 40 | 60 | 60 | 65 | 50 | W |
| 11 | 100 | 100 | 80 | 80 | G | 41 | 50 | 60 | 60 | 60 | W |
| 12 | 60 | 50 | 50 | 40 | G | 42 | 65 | 65 | 70 | 70 | W |
| 13 | 40 | 40 | 45 | 45 | G | 43 | 70 | 70 | 70 | 70 | W |
| 14 | 40 | 35 | 35 | 35 | G | 44 | 75 | 80 | 80 | 75 | W |
| 15 | 35 | 35 | 40 | 50 | G | 45 | 70 | 70 | 70 | 60 | W |
| 16 | 50 | 50 | 45 | 20 | G | 46 | 60 | 60 | 50 | 50 | W |
| 17 | 30 | 30 | 30 | 35 | B | 47 | 50 | 50 | 50 | 50 | W |
| 18 | 25 | 25 | 20 | 20 | W | 48 | 45 | 50 | 45 | 50 | W |
| 19 | 20 | 20 | 15 | 15 | W | 49 | 50 | 50 | 50 | 45 | W |
| 20 | 15 | 20 | 20 | 25 | W | 50 | 45 | 45 | 40 | 40 | W |
| 21 | 25 | 20 | 20 | 20 | W | 51 | 50 | 30 | 30 | 25 | G |
| 22 | 15 | 15 | 15 | 20 | W | 52 | 5 | 5 | 10 | 5 | W |
| 23 | 15 | 10 | 10 | 15 | W | 53 | 10 | 15 | 15 | 25 | W |
| 24 | 15 | 10 | 10 | 10 | W | 54 | 25 | 20 | 20 | 20 | W |
| 25 | 10 | 10 | 15 | 15 | W | 55 | 20 | 20 | 25 | 20 | W |
| 26 | 15 | 25 | 25 | 30 | W | 56 | 5 | 10 | 5 | 5 | W |
| 27 | 30 | 30 | 25 | 25 | W | 57 | 0 | 0 | 10 | 10 | W |
| 28 | 30 | 30 | 30 | 25 | W | 58 | 10 | 10 | 5 | 5 | W |
| 29 | 25 | 25 | 25 | 25 | W | 59 | 5 | 5 | 10 | 15 | W |

Observer's Signature S. Wynnchenko

Last Certification Date 4-5-90

Observer's Affiliation

USEPA

VISIBLE EMISSION EVALUATOR'S REPORT TO ENFORCEMENT

Source Identification

Facility: Chemetco, Hartford, Illinois

Source: Roof Monitor

Regulation: Illinois Rule 202 (b)

Evaluator's Report

On May 22, 1990, visible emission evaluation began at 9:10 a.m., and continued for 60 minutes.

SUMMARY OF READINGS

| Set Number | Time Start - End (C T) | Opacity Average | Readings | |
|------------|------------------------------|--------------------|------------|------|
| | | | >30 to 60% | >60% |
| 1 | 9:10 - 9:16 | 53.13 | 19 | 5 |
| 2 | 9:16 - 9:22 | 78.54 | 3 | 21 |
| 3 | 9:22 - 9:28 | 40.21 | 20 | — |
| 4 | 9:28 - 9:34 | 18.33 | — | — |
| 5 | 9:34 - 9:40 | 21.46 | — | — |
| 6 | 9:40 - 9:46 | 48.13 | 18 | 1 |
| 7 | 9:46 - 9:52 | 57.92 | 17 | 7 |
| 8 | 9:52 - 9:58 | 64.58 | 9 | 15 |
| 9 | 9:58 - 10:04 | 31.67 | 12 | — |
| 10 | 10:04 - 10:10 | 11.67 | — | — |

Readings ranged from 0 to 100 % opacity.

Meteorological Conditions: Cloud Cover Partly Cloudy
Ambient Temperature 60-65 °F.

Evaluation Conditions: Excellent _____ Good ✓ Fair _____

Name and qualification of expert witness to attest to above:

Signature: J. W. Wyszynski

Name: J. W. Wyszynski

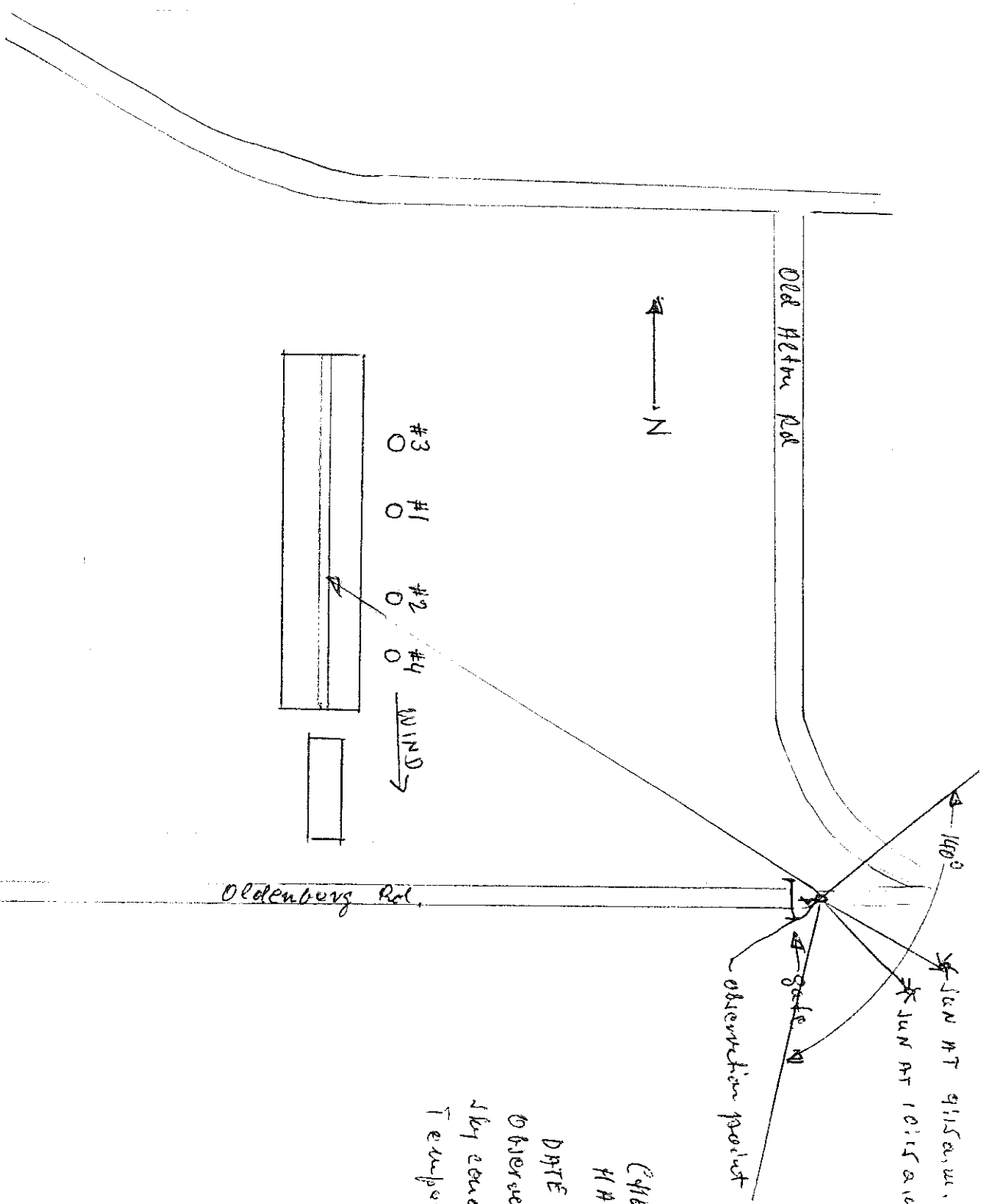
Title: Environmental Scientist

Office: CDD

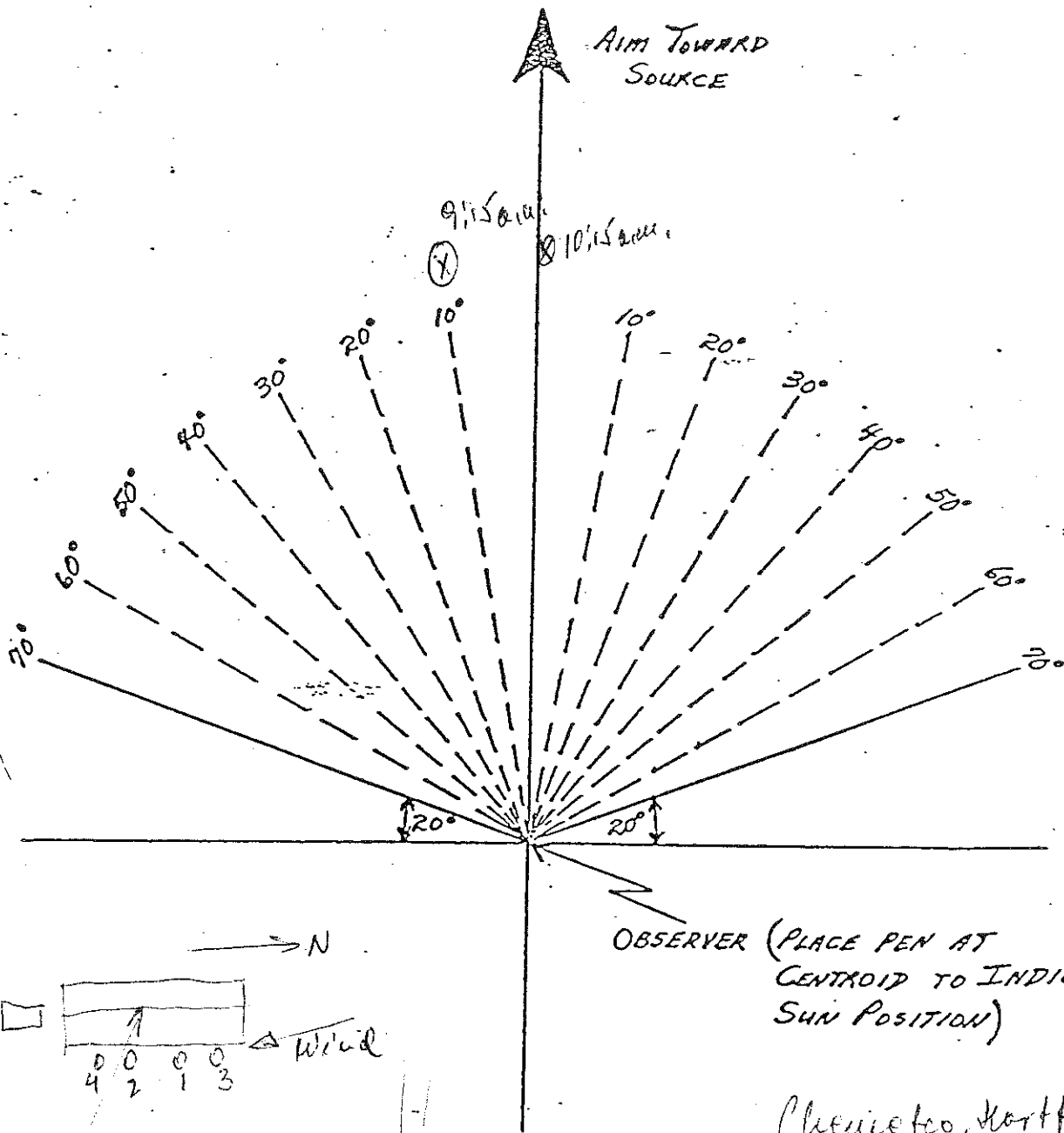
Date of Last Certification: 4-5-90

Initials of person who summarized data: S.W.

Route 3



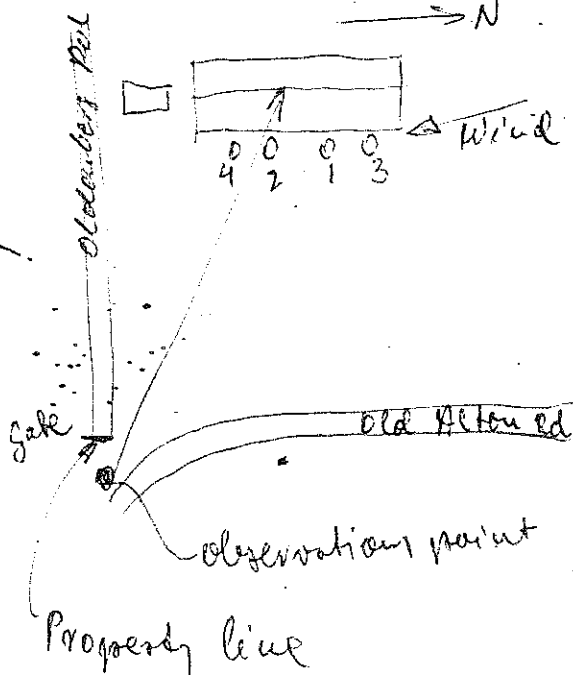
CHEMETCO
HALLFORD, ILL
DATE: 5-22-90
Observer: J. WYNNCHENKO
Sky conditions: Partly Cloudy,
Temperature: 60 to 65°F



Chenieteo, Kortford, IL

5-22-90

Roof Monitor



VISIBLE EMISSIONS EVALUATION FORM - USEPA REGION V

Date: 5-22-90

Observer: S. WYNNYCHENKO

Facility: Chemeter

Hartford, Illinois

Source: Scrubber Stack #2

Observation Point: Southwest end
off Oldenberg Road near gate
(property line)

Distance From: 400 yards

Direction From: SE

Source Height: 130 ft.

| | Initial | Final |
|------------------------|----------------------|-------|
| Wind Direction | <u>N</u> | |
| Wind Speed | <u>5-8 mph</u> | |
| Sky Condition | <u>Partly cloudy</u> | |
| Background | <u>Sky</u> | |
| Ambient Temperature °F | <u>65</u> | |
| Humidity (high-low) | <u>Low</u> | |
| Color of Emissions | <u>White (gray)</u> | |
| Reading Conditions | <u>Good</u> | |

Plant Representatives: None

State/Local Agency Representatives:

None

Observation

Began 10:25 a.m., Ended 11:07 a.m.
(,T)

Remarks: Interference with the
roof revision plane
W - white
G - gray

| Sec Min | 0 | 15 | 30 | 45 | Comments | Sec Min | 0 | 15 | 30 | 45 | Comments |
|------------|----|----|----|----|----------|------------|---|----|----|----|----------|
| 0 | 20 | 20 | 20 | 25 | G | 30 | 0 | 0 | 0 | 0 | |
| 1 | 20 | 20 | 15 | 15 | | 31 | 0 | 0 | 0 | 0 | |
| 2 | 25 | 25 | 10 | 10 | W | 32 | 0 | 0 | 0 | 0 | |
| 3 | 20 | 20 | 20 | X | W | 33 | 0 | 0 | 0 | 0 | |
| 4 | X | X | X | 20 | W | 34 | 0 | 0 | 0 | 0 | |
| 5 | 20 | X | X | X | W | 35 | 0 | 0 | 0 | 0 | |
| 6 | X | X | 25 | 30 | W | 36 | 0 | 0 | 0 | 0 | |
| 7 | 35 | 35 | 30 | 30 | W | 37 | 0 | 0 | 0 | 0 | |
| 8 | 20 | 20 | 20 | 20 | G | 38 | 0 | 0 | 0 | 0 | |
| 9 | 15 | 15 | 15 | 20 | G | 39 | 0 | 0 | 0 | 0 | |
| 10 | 20 | 25 | 20 | 20 | G | 40 | 0 | 0 | 0 | 0 | |
| 11 | 5 | 0 | 0 | 0 | G | 41 | 0 | 0 | 0 | 0 | |
| 12 | 0 | 0 | 0 | 0 | | 42 | | | | | |
| 13 | 0 | 0 | 0 | 0 | | 43 | | | | | |
| 14 | 0 | 0 | 0 | 0 | | 44 | | | | | |
| 15 | 0 | 0 | 0 | 0 | | 45 | | | | | |
| 16 | 0 | 0 | 0 | 0 | | 46 | | | | | |
| 17 | 0 | 0 | 0 | 0 | | 47 | | | | | |
| 18 | 0 | X | X | X | | 48 | | | | | |
| 19 | X | X | 0 | 0 | | 49 | | | | | |
| 20 | 0 | X | X | 0 | | 50 | | | | | |
| 21 | 0 | 0 | 0 | 0 | | 51 | | | | | |
| 22 | 0 | X | X | 0 | | 52 | | | | | |
| 23 | 0 | 0 | 0 | 0 | | 53 | | | | | |
| 24 | 0 | 0 | 0 | 0 | | 54 | | | | | |
| 25 | 0 | 0 | 0 | 0 | | 55 | | | | | |
| 26 | 0 | 0 | 0 | 0 | | 56 | | | | | |
| 27 | 0 | 0 | 0 | 0 | | 57 | | | | | |
| 28 | 0 | 0 | 0 | 0 | | 58 | | | | | |
| 29 | 0 | 0 | 0 | 0 | | 59 | | | | | |

Observer's Signature S. Wynnchenko

Last Certification Date 4-5-90

VISIBLE EMISSION EVALUATOR'S REPORT TO ENFORCEMENT

Source Identification

Facility: Chemeco, Hartford, Illinois

Source: #2 scrubber stack

Regulation: Illinois Rule 202(b)

Evaluator's Report

On May 22, 1990, visible emission evaluation began at 10:25 a.m.
and continued for 42 minutes.

SUMMARY OF READINGS

| Set Number | Time Start - End (C_T) | Opacity Average | Readings | |
|------------|------------------------------|--------------------|------------|------|
| | | | >30 to 60% | >60% |
| 1 | 10:25 - 10:31 | 13.54 | — | — |
| 2 | 10:31 - 10:37 | 17.5 | 2 | — |
| 3 | 10:37 - 10:43 | 0.0 | — | — |
| 4 | 10:43 - 10:49 | 0.0 | — | — |
| 5 | 10:49 - 10:55 | 0.0 | — | — |
| 6 | 10:55 - 11:01 | 0.0 | — | — |
| 7 | 11:01 - 11:07 | 0.0 | — | — |
| | | | | |
| | | | | |
| | | | | |

Readings ranged from 0 to 35 % opacity.

Meteorological Conditions: Cloud Cover: Partly Cloudy
Ambient Temperature 65 °F.

Evaluation Conditions: Excellent _____ Good ✓ Fair _____

Name and qualification of expert witness to attest to above:

Signature: [Signature]

Name: S. W. Nychenko

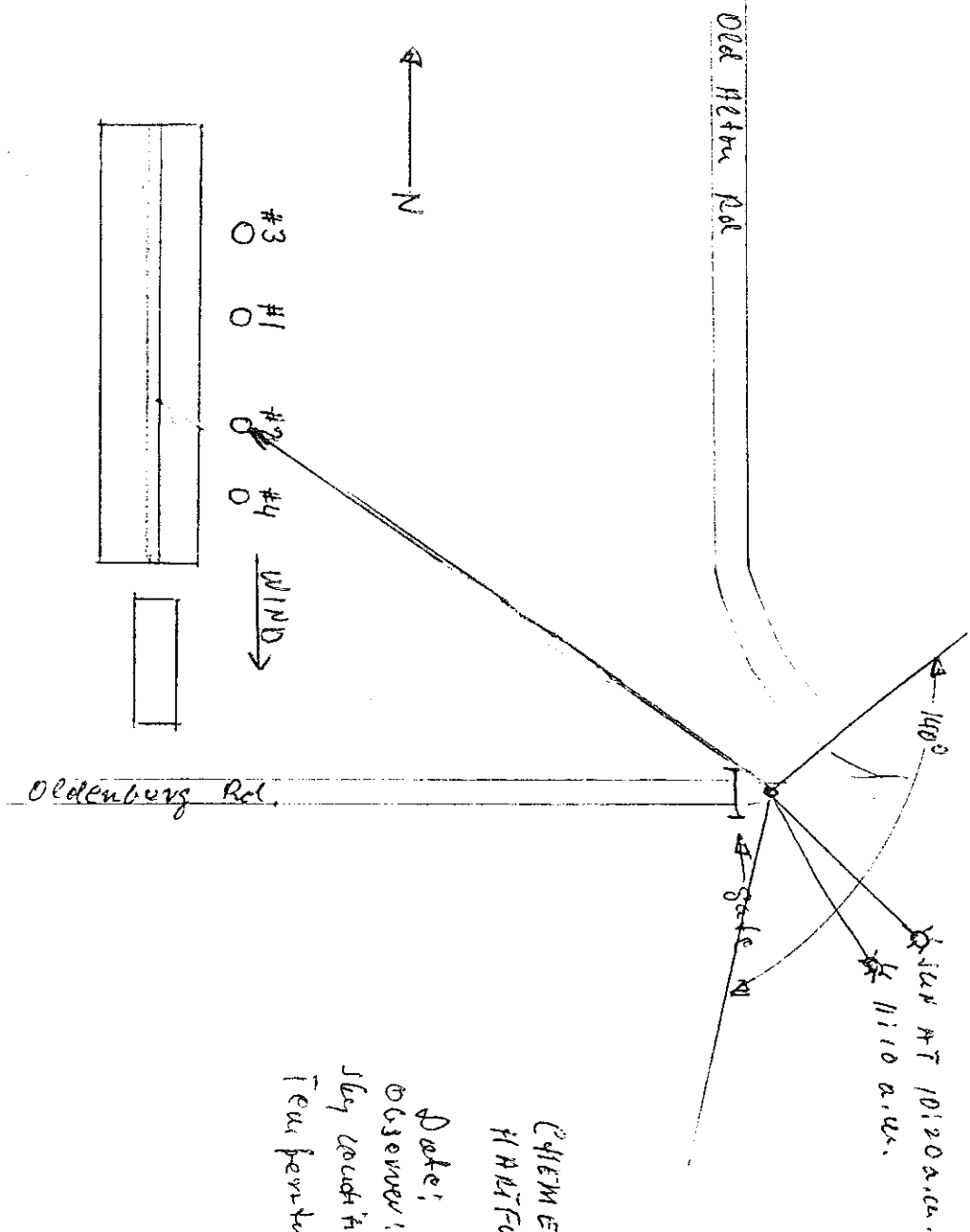
Title: Environmental Scientist

Office: CDD

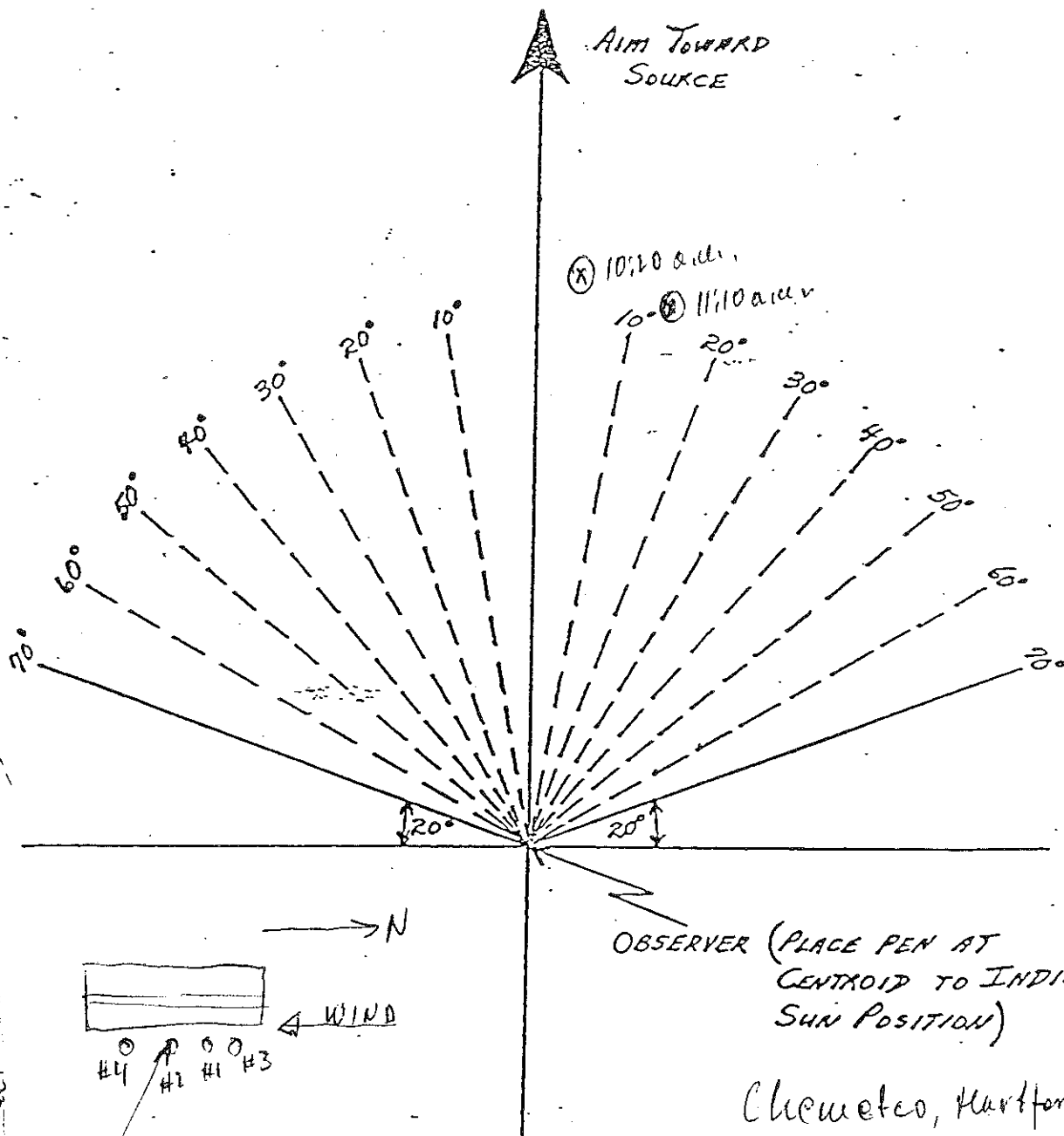
Date of Last Certification: 4-5-90

Initials of person who summarized data: J, C

Route 3



CHEMETO
HARTFORD, ILL
Date: 5-22-90
Observer: V. W. W. W. W.
Sky conditions: Partly Cloudy
Temperature: 61°F



Chemeco, Hartford, Ct

5-22-00

#2 Scrubber stack

Old Water Ret.

Old Water Ret.

observation point

VISIBLE EMISSIONS REPORT

Source Identification

Facility: Chemtec Foundry, Hartford, Illinois

Source : Stacks

Regulation: Illinois Rule 202(b)

Evaluator's Report

During the stated periods of observation, the following sources appeared as shown:

| Process or Source | Scrubber Stack # 1 | Scrubber Stack # 3 | Scrubber Stack # 4 | |
|------------------------------|-------------------------------|-------------------------------|--|--|
| Date | 5-22-90 | 5-22-90 | 5-22-90 | |
| Obs. Time Start-End —T— | 9:10 a.m. to 11:00 a.m. | 9:10 a.m. to 11:00 a.m. | 9:10 a.m. to 11:00 a.m. | |
| Estimated Range of Opacity % | 0 | 0 | not determined | |
| Operating? | No | Yes | Yes | |
| Control Device(s) | scrubber | scrubber | scrubber | |
| Emission Point | stack | stack | stack | |
| Remarks | | | 100% plume was visible under roof monitor plume. | |

Name and Qualification of expert witness to attest to above:

Signature: S. Wynnichenko

Name : S. WYNNICHENKO

Title : Environmental Scientist

Office : CDO

Date of Last Certification: 4-5-90

EVENT SUMMARY

| 3 | 5/22 | HEAT | TYP | 3 | 4 | 3 | 2 | 3 | 1 | 3 | 3 | 3 |
|---|-------|------|-----|---|-------------|---|-------------|---|---|---|------------|---|
| 3 | 6:35 | 606 | SME | 3 | | 3 | | 3 | | 3 | Charge | 3 |
| 3 | 6:39 | 606 | SME | 3 | | 3 | | 3 | | 3 | Slag Trans | 3 |
| 3 | 6:40 | 530 | REF | 3 | Slag off | 3 | | 3 | | 3 | | 3 |
| 3 | 6:45 | 523 | BRZ | 3 | | 3 | Blow Tap #1 | 3 | | 3 | | 3 |
| 3 | 6:45 | 530 | REF | 3 | Ref Cu Samp | 3 | | 3 | | 3 | | 3 |
| 3 | 7:05 | 606 | SME | 3 | | 3 | | 3 | | 3 | Slag Trans | 3 |
| 3 | 7:37 | 530 | REF | 3 | Tap Metal | 3 | | 3 | | 3 | | 3 |
| 3 | 7:50 | 606 | SME | 3 | | 3 | | 3 | | 3 | T.H. Metal | 3 |
| 3 | 7:55 | 531 | REF | 3 | Charge | 3 | | 3 | | 3 | | 3 |
| 3 | 7:56 | 531 | REF | 3 | Charge | 3 | | 3 | | 3 | | 3 |
| 3 | 7:57 | 531 | REF | 3 | Charge | 3 | | 3 | | 3 | | 3 |
| 3 | 7:58 | 531 | REF | 3 | Charge | 3 | | 3 | | 3 | | 3 |
| 3 | 9:10 | 523 | BRZ | 3 | | 3 | Charge | 3 | | 3 | | 3 |
| 3 | 9:50 | 523 | BRZ | 3 | | 3 | Samp Red.#2 | 3 | | 3 | | 3 |
| 3 | 10:10 | 523 | BRZ | 3 | | 3 | Samp Red.#2 | 3 | | 3 | | 3 |
| 3 | 10:15 | 606 | SME | 3 | | 3 | | 3 | | 3 | Slag Trans | 3 |
| 3 | 10:20 | 606 | SME | 3 | | 3 | | 3 | | 3 | Tap Blk Cu | 3 |
| 3 | 10:25 | 523 | BRZ | 3 | | 3 | Tap 2nd Mt1 | 3 | | 3 | | 3 |

FOR DETAIL

PF4 - FCE 4

PF2 - FCE 2

PF1 - FCE 1

PF3 - FCE 3

EVENT SUMMARY

| 3 | 5/22 | HEAT | TYP | 3 | 4 | 3 | 2 | 3 | 1 | 3 | 3 | 3 |
|---|-------|------|-----|---|-------------|---|-------------|---|-------------|---|-------------|---|
| 3 | 10:25 | 523 | BRZ | 3 | | 3 | Tap 2nd Mt1 | 3 | | 3 | | 3 |
| 3 | 10:30 | 531 | REF | 3 | Metal Trans | 3 | | 3 | FURNACE #1 | 3 | | 3 |
| 3 | 10:35 | 607 | SME | 3 | | 3 | | 3 | DOWN FOR | 3 | Smelt Trans | 3 |
| 3 | 10:36 | 607 | SME | 3 | | 3 | | 3 | PM Bearing | 3 | Charge | 3 |
| 3 | 11:05 | 524 | SME | 3 | | 3 | Charge | 3 | Change | 3 | | 3 |
| 3 | 11:30 | 531 | REF | 3 | Charge | 3 | | 3 | | 3 | | 3 |
| 3 | 11:31 | 693 | SME | 3 | | 3 | | 3 | Delay | 3 | | 3 |
| 3 | 12:15 | 694 | SME | 3 | | 3 | | 3 | Slag Trans | 3 | | 3 |
| 3 | 12:15 | 524 | SME | 3 | | 3 | Slag off | 3 | | 3 | | 3 |
| 3 | 12:15 | 531 | REF | 3 | Charge | 3 | | 3 | | 3 | | 3 |
| 3 | 12:25 | 524 | SME | 3 | | 3 | Tap Blk Cu | 3 | | 3 | | 3 |
| 3 | 12:35 | 694 | SME | 3 | | 3 | | 3 | Metal Trans | 3 | | 3 |
| 3 | 15:51 | 531 | REF | 3 | Slag off | 3 | | 3 | | 3 | | 3 |
| 3 | | | | 3 | | 3 | | 3 | | 3 | | 3 |
| 3 | | | | 3 | | 3 | | 3 | | 3 | | 3 |
| 3 | | | | 3 | | 3 | | 3 | | 3 | | 3 |
| 3 | | | | 3 | | 3 | | 3 | | 3 | | 3 |
| 3 | | | | 3 | | 3 | | 3 | | 3 | | 3 |

FOR DETAIL

PF4 - FCE 4

PF2 - FCE 2

PF1 - FCE 1

PF3 - FCE 3

M. Repack
Chemicals, Inc.
5/22/90

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION V

Central DISTRICT OFFICE

STATE NOTIFICATION OF INSPECTION

Authority: SECTION 114(d)(1)-CLEAN AIR ACT, AS AMENDED

CWA, TSCA, RCRA, SWDA

Source Name CHEMETCO

Address _____

City HARTFORD, ILLINOIS

State _____

Person Notified John Justice 618-346-5120

Title _____

(Secretary)

Organization EPA

Date of Notification 4-25-90 5-11-90

Planned Date of Inspection 5-22 (or 23) -90

Purpose of Inspection (compliance monitoring, Enforcement Division request etc.)

TSP Compliance Investigation

Scope _____

Person Giving Notice S. W. N. N. CHENK

Title Environmental Scientist

Organization USEPA, Region V, EDD/CDO

J. J. Kuylen

(signature)

CDO

(organization)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: JAN 11 1990

SUBJECT: Chemetco Foundry, Hartford, Illinois
(2-85-89) (AFH114:A2)
BD

FROM: Basim DiHu, Environmental Engineer
Central District Office (5SCDO)

TO: Larry F. Kertcher, Chief
Air Compliance Branch (5ACB)

ATTN: Sharon Freeman (5ACB)

THRU: Willie H. Harris, Chief *WVH*
Central District Office (5SCDO)

Acting on John Gaitskill's request of September 5, 1989, the subject facility was visited on October 19, 1989, to conduct the second of the three requested inspections related to the TSP Compliance. Specifically, the request was to: 1) observe and record visible emissions for one hour from the roof monitor; 2) observe and record visible emissions for one hour from each stack; and 3) verify production rates and time of charging and tapping at each furnace. The Illinois Environmental Protection Agency was notified of the date and time of this inspection, but did not participate.

Off Site Observations

On October 19, 1989, prior to entry into the facility visible emission observations were made at the following sources:

1 - Roof Monitor Emissions

Roof monitor emissions were taken by the writer for a period of one hour between 10:06 a.m. and 11:06 a.m. in accordance to Method 9, to assess compliance with Illinois Rule 202(b). The Illinois Rules specify that emission of smoke or other particulate matter from any such emission source may have an opacity greater than 30%, but less than 60% for a period or periods aggregating eight minutes in any 60 minute period. As shown by the attached observations and summary sheets, 66 readings exceeded 60% opacity.

2 - Scrubber Stacks

Visible emission observations on the four scrubber stacks were not taken due to weather conditions and wind direction. The plumes emanating from all four stacks were co-mingling with each other before the steam dissipated.

On Site Observations

At 12:00 p.m., I entered the facility and met with Jeff Zorger, Plant Manager.

Significant inspection findings are listed below:

- 1 - The facility is planning to install a baghouse on the furnaces by July 1, 1990.
- 2 - Attached to this inspection report is a computer printout copy provided by the company. This copy details the events that were occurring inside the company at the time of the inspection.
- 3 - Also attached to this transmittal are copies of the visible emissions observation sheets, and summary sheet.

If you have any questions concerning this inspection report, please call me at 886-6242.

Attachments

VISIBLE EMISSIONS EVALUATION FORM - USEPA REGION V

Facility CHEME TCO

Date: 10-19-89

Observer: BASIM DILU

HARTFORD, ILL

Source: SECONDARY COPPER
SMELTER- ROOF MONITOR
EMISSIONS

Observation Point: OFF ROUTE
(3)

Distance From: 300 YARD

Direction From: SW

Source Height: 80 FT

| | Initial | Final |
|------------------------|------------------|--------------|
| Wind Direction | <u>NW</u> | <u>→</u> |
| Wind Speed | <u>10-15 MPH</u> | |
| Sky Condition | <u>OVERCAST</u> | |
| Background | <u>SKY</u> | <u>→</u> |
| Ambient Temperature °F | <u>38 °F</u> | <u>40 °F</u> |
| Humidity (high-low) | <u>Low</u> | |
| Color of Emissions | <u>BLACK</u> | <u>BROWN</u> |
| Reading Conditions | <u>FAIR</u> | <u>→</u> |

Plant Representatives:

NONE

State/Local Agency Representatives:

NONE

Observation

Began 10:06 AM Ended 11:06 AM

(T)

Remarks:

| Sec Min | 0 | 15 | 30 | 45 | Comments | Sec Min | 0 | 15 | 30 | 45 | Comments |
|------------|-----|-----|-----|-----|----------------------|------------|----|-----|----|----|-------------------------|
| 0 | 50 | 50 | 50 | 50 | BLACK EMISSION | 30 | 10 | 10 | 15 | 15 | |
| 1 | 60 | 60 | 60 | 65 | | 31 | 15 | 15 | 15 | 15 | |
| 2 | 70 | 70 | 100 | 100 | BLACK EMISSION | 32 | 15 | 15 | 10 | 10 | |
| 3 | 100 | 100 | 100 | 100 | Middle monitor | 33 | 10 | 10 | 65 | 70 | BROWN EMISSION |
| 4 | 100 | 85 | 85 | 100 | | 34 | 70 | 65 | 65 | 40 | Middle to NORTH MONITOR |
| 5 | 100 | 100 | 100 | 75 | | 35 | 25 | 25 | 20 | 10 | |
| 6 | 75 | 70 | 70 | 70 | | 36 | 10 | 5 | 5 | 5 | |
| 7 | 65 | 75 | 80 | 85 | | 37 | 5 | 5 | 5 | 5 | |
| 8 | 85 | 85 | 75 | 75 | | 38 | 5 | 5 | 5 | 5 | |
| 9 | 70 | 70 | 65 | 65 | | 39 | 10 | 10 | 10 | 10 | |
| 10 | 65 | 75 | 75 | 80 | | 40 | 15 | 15 | 15 | 20 | |
| 11 | 80 | 70 | 70 | 70 | | 41 | 20 | 20 | 20 | 20 | |
| 12 | 70 | 70 | 70 | 70 | | 42 | 20 | 20 | 20 | 20 | |
| 13 | 70 | 70 | 70 | 70 | | 43 | 20 | 20 | 20 | 20 | |
| 14 | 65 | 65 | 65 | 60 | GRAY EMISSION Middle | 44 | 20 | 20 | 20 | 15 | |
| 15 | 60 | 60 | 65 | 65 | | 45 | 15 | 5 | 5 | 5 | |
| 16 | 70 | 75 | 70 | 70 | | 46 | 5 | 100 | 90 | 70 | WHITE TO BROWN |
| 17 | 60 | 55 | 50 | 45 | | 47 | 50 | 45 | 45 | 25 | |
| 18 | 40 | 30 | 20 | 25 | | 48 | 25 | 25 | 20 | 20 | |
| 19 | 25 | 20 | 20 | 15 | | 49 | 20 | 20 | 15 | 15 | |
| 20 | 15 | 15 | 15 | 10 | | 50 | 15 | 15 | 10 | 10 | |
| 21 | 10 | 5 | 5 | 5 | | 51 | 10 | 10 | 10 | 10 | |
| 22 | 5 | 5 | 5 | 5 | | 52 | 30 | 25 | 25 | 30 | |
| 23 | 5 | 5 | 5 | 5 | | 53 | 40 | 35 | 30 | 20 | |
| 24 | 5 | 5 | 5 | 5 | | 54 | 15 | 15 | 20 | 15 | |
| 25 | 5 | 5 | 5 | 5 | | 55 | 15 | 15 | 15 | 15 | |
| 26 | 5 | 5 | 5 | 5 | | 56 | 15 | 20 | 25 | 25 | |
| 27 | 5 | 5 | 5 | 5 | | 57 | 35 | 35 | 35 | 25 | BROWN Middle |
| 28 | 5 | 5 | 5 | 5 | | 58 | 25 | 20 | 20 | 15 | |
| 29 | 5 | 10 | 10 | 10 | | 59 | 15 | 15 | 20 | 15 | |

Observer's Signature Basim Dilu

Last Certification Date 10-10-89

Observer's Affiliation USEPA CDO

SUMMARY OF VISIBLE EMISSION OBSERVATIONS - USEPA, REGION V

Source Identification

Facility: CHEMETCO HARTFORD, ILL

Source: SECONDARY COPPER SMELTER - ROOF MONITOR EMISSIONS

Regulation: Illinois Rule 202 (b)

Evaluator's Report

On 10-19, 1989, visible emission evaluation began at 10:06 AM, and continued for 60 minutes.

SUMMARY OF READINGS

| Set Number | Time Start-End C_T | Opacity Average | Readings | |
|------------|--------------------------|--------------------|-------------|------|
| | | | >30% to 60% | >60% |
| 1 | 10:06 AM - 10:12 AM | 80.42 | 7 | 17 |
| 2 | 10:12 AM - 10:18 AM | 73.54 | 0 | 24 |
| 3 | 10:18 AM - 10:24 AM | 65.00 | 7 | 17 |
| 4 | 10:24 AM - 10:30 AM | 13.13 | 1 | 0 |
| 5 | 10:30 AM - 10:36 AM | 5.63 | 0 | 0 |
| 6 | 10:36 AM - 10:42 AM | 23.13 | 1 | 5 |
| 7 | 10:42 AM - 10:48 AM | 10.42 | 0 | 0 |
| 8 | 10:48 AM - 10:54 AM | 28.96 | 3 | 3 |
| 9 | 10:54 AM - 11:00 AM | 20.21 | 2 | 0 |
| 10 | 11:00 AM - 11:06 AM | 20.21 | 3 | 0 |

Readings ranged from 5 to 100 % opacity.

Meteorological Conditions: Cloud Cover OVER CAST.

Ambient Temperature 38-40 °F.

Evaluation Conditions: Excellent _____ Good _____ Fair X

Name and qualification of expert witness to attest to above:

Signature: Basim Dulu

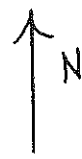
Name: BASIM DULU

Title: ENV. ENG.

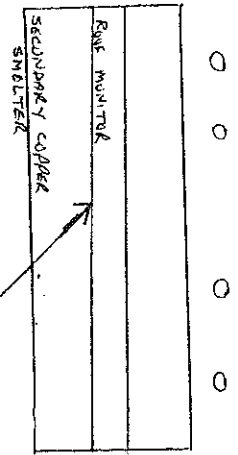
Office: CDO

Date of Last Certification: 10-10-89

Initials of person who summarized data: BD



ROUTE 3



300 YARD

OLDENBERG RD

Base Point

20°

20°

OVER CAST

CHEMETCO
HARTFORD, ILL

REGION V

CENTRAL DISTRICT OFFICE

STATE NOTIFICATION OF INSPECTION

Authority: X SECTION 114(d)(1)-CLEAN AIR ACT, AS AMENDED

 CWA, TSCA, RCRA, SWDA

Source Name CHEMET CO.

Address

City : HARTFORD

State I 66

Person Notified JOHN JUSTICE

Title MANAGER of AIR Pollution Control

Organization EPA Collinsville Office

Date of Notification 10-11-89

Planned Date of Inspection 10-19-89

Purpose of Inspection (compliance monitoring, Enforcement Division request etc.)

TSP Compliance

Scope TSP Compliance

Person Giving Notice BASIM DIHU

Title ENV. ENG...

Organization: CENTRAL DISTRICT OFFICE

Basim Diki

(signature)

CPD

(organization)

1:29:07 PM MONDAY OCTOBER 30, 1989

| EVENT SUMMARY | | | | | | | | | |
|---------------|------|-----|-------------|-------------|-------------|-------------|--|--|--|
| 10/19 | HEAT | TYP | 4 | 2 | 1 | 3 | | | |
| 8:50 | E12 | BRZ | | | | | | | |
| 9:15 | S88 | SME | | | | | | | |
| 9:16 | S88 | SME | | | | | | | |
| 9:20 | E12 | BRZ | | | | | | | |
| 9:20 | 798 | REF | | | | | | | |
| 9:30 | E12 | BRZ | | | | | | | |
| 9:30 | 798 | REF | | | | | | | |
| 9:35 | S89 | REF | | | | | | | |
| 9:40 | E36 | SME | | | | | | | |
| 9:45 | E36 | SME | | | | | | | |
| 10:10 | S89 | REF | | | | | | | |
| 10:30 | E36 | SME | | | | | | | |
| 10:40 | E12 | BRZ | | | | | | | |
| 11:10 | E37 | SME | | | | | | | |
| 11:15 | E12 | BRZ | | | | | | | |
| 11:45 | E12 | BRZ | | | | | | | |
| 12:10 | E37 | SME | | | | | | | |
| 12:30 | 798 | REF | | | | | | | |
| FOR DETAIL | | | | | | | | | |
| | | | PF4 - FCE 4 | PF2 - FCE 2 | PF1 - FCE 1 | PF3 - FCE 3 | | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 10 OCT 1989

SUBJECT: Chemetco Foundry, Hartford, Illinois
(2-85-89) (AFH114:K7)

BD

FROM: Basim DiHu, Environmental Engineer
Central District Office (5SCDO)

TO: Larry Kertcher, Chief
Air Compliance Branch (5ACB)

ATTN: Sharon Freeman (5ACB)

THRU: Willie H. Harris, Chief *WHH*
Central District Office (5SCDO)

Acting on John Gaitskill's request of September 5, 1989, the subject facility was visited on September 28, 1989, to conduct the first of the three requested inspections relative to the TSP Compliance Investigation. Specifically, the request was to: 1) observe visible emissions for one hour from the roof monitor; 2) observe visible emissions for one hour from each stack; and 3) verify production rates and time of charging and tapping at each furnace. The Illinois Environmental Protection Agency was notified of the date and time of this inspection, but did not participate.

Off Site Observations

On September 28, 1989, prior to entry into the facility visible emission observations were made at the following sources:

1 - Roof Monitor Emissions

Roof monitor emissions were observed by the writer for a period of one hour between 10:35 a.m. and 11:35 a.m. in accordance to Method 9, to assess compliance with Illinois Rule 202(b). The Illinois Rules specify that emission of smoke or other particulate matter from any such emission source may have an opacity greater than 30%, but less than 60% for a period or periods aggregating eight minutes in any 60 minute period. As shown by the attached observations and summary sheets, 87 readings exceeded 60% opacity.

2 - Scrubber Stacks

- a) Visible emission observations were observed from the North stack for a period of one hour between 11:41 a.m. and 12:41 p.m. in accordance with Method 9 to assess Compliance with Illinois Rule 202 (b). As shown by the attached observation and summary sheets, 82 readings exceeded 60% opacity.
- b) Visible emission observations were observed from the South stack for a period of one hour between 12:42 p.m. and 1:42 p.m. in accordance with Method 9 to assess Compliance with Illinois Rule 202 (b). As shown by the attached observation and summary sheets, 127 readings exceeded 60% opacity.
- c) Informal visible emission observations were made between 10:30 a.m. and 1:45 p.m. from the two middle stacks. The estimated range of opacities were 0-20%.

On Site Observations

At 2:00 p.m., I entered the facility and met with Jeff Zorger.

Significant inspection findings are listed below:

- 1 - According to Mr. Jeff Zorger, the facility is under a Consent Decree with the Illinois Environmental Protection Agency.
- 2 - The facility is planning to install a baghouse on the furnaces by July 1, 1990.
- 3 - Attached to this inspection report is a computer printout copy provided by the company. This copy details the events that were occurring inside the company at the time of the inspection.
- 4 - Attached to this inspection report is a copy of the Consent Decree.
- 5 - Also attached to this transmittal are copies of the visible emissions observation sheets, summary sheets, and sun diagrams.

If you have any questions concerning this inspection report, please call me at 886-6242.

Attachments

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION V

CENTRAL DISTRICT OFFICE

STATE NOTIFICATION OF INSPECTION

Authority: X SECTION 114(d)(1)-CLEAN AIR ACT, AS AMENDED

_____CWA, _____TSCA, _____RCRA, _____SWDA

Source Name . CHEMETCO

Address

City : HART FORD

State IL

Person Notified: JOHN JUSTICE

Title Chief Air Pollution Section Collinsville Office

Organization \ I-EPA

Date of Notification 9-15-89

Planned Date of Inspection 9-28-89

Purpose of Inspection (compliance monitoring, Enforcement Division request etc.)

TSP Compl

Scope: TSP Comp.

Person Giving Notice BASIM DHU

Title ENV. ENG...

Organization: CENTRAL DISTRICT OFFICE

Basim Diki

(signature)

CD 0

(organization)

SUMMARY OF VISIBLE EMISSION OBSERVATIONS - USEPA, REGION V

Source Identification

Facility: CHEMET CO HARTFORD, ILL

Source: SECONDARY COPPER SMELTER - THE SOUTH STACK

Regulation: Illinois Rule 202(b)

Evaluator's Report

On 9-28, 1989, visible emission evaluation began at 12:42 PM,
and continued for 60 minutes.

SUMMARY OF READINGS

| Set Number | Time Start-End C T | Opacity Average | Readings | |
|------------|--------------------------|--------------------|-------------|------|
| | | | >30% to 60% | >60% |
| 1 | 12:42 PM - 12:48 PM | 85.83 | 0 | 24 |
| 2 | 12:48 PM - 12:54 PM | 71.67 | 0 | 24 |
| 3 | 12:54 PM - 1:00 PM | 65.83 | 7 | 17 |
| 4 | 1:00 PM - 1:06 PM | 69.79 | 0 | 24 |
| 5 | 1:06 PM - 1:12 PM | 58.75 | 7 | 13 |
| 6 | 1:12 PM - 1:18 PM | 27.50 | 9 | 0 |
| 7 | 1:18 PM - 1:24 PM | 26.67 | 7 | 0 |
| 8 | 1:24 PM - 1:30 PM | 37.92 | 1 | 7 |
| 9 | 1:30 PM - 1:36 PM | 68.21 | 2 | 12 |
| 10 | 1:36 PM - 1:42 PM | 63.75 | 2 | 6 |

Readings ranged from 15 to 90 % opacity.

Meteorological Conditions: Cloud Cover CLEAR.

Ambient Temperature 70 °F.

Evaluation Conditions: Excellent _____ Good ✓ Fair _____

Name and qualification of expert witness to attest to above:

Signature: Basim Dinu

Name: BASIM DINU

Title: ENV. ENG

Office: CDO

Date of Last Certification: 4-10-89

Initials of person who summarized data: ED

VISIBLE EMISSIONS EVALUATION FORM - USEPA REGION V

Facility

CHEMETCO

Date:

9-28-89

Observer:

BASIM DIHU

HARTFORD, CT

Source:

SECONDARY COPPER
SMELTER - THE SOUTH
STACK

Observation Point:

OFF OF
OLDENBERG RD

Distance From:

350 YARDS

Direction From:

SE

Source Height:

85 FT

| | Initial | Final |
|------------------------|------------------------------|------------|
| Wind Direction | <u>S</u> | <u>---</u> |
| Wind Speed | <u>2-7 MPH</u> | <u>---</u> |
| Sky Condition | <u>CLEAR some clouds</u> | <u>---</u> |
| Background | <u>BLUE SKY</u> | <u>---</u> |
| Ambient Temperature °F | <u>70</u> | <u>---</u> |
| Humidity (high-low) | <u>Medium</u> | <u>---</u> |
| Color of Emissions | <u>WHITE</u> | <u>---</u> |
| Reading Conditions | <u>GOOD</u> | <u>---</u> |

Plant Representatives:

NONE

State/Local Agency Representatives:

NONE

Observation

Began 12:42 PM Ended 1:42 PM

(F T)

Remarks: (*) Emissions

FROM THE ROOF MONITOR
COVER THE STACK - BLOCKED
MY VIEW

| Sec Min | 0 | 15 | 30 | 45 | Comments | Sec Min | 0 | 15 | 30 | 45 | Comments |
|------------|----|----|----|----|--|------------|----|----|----|----|--|
| 0 | 90 | 90 | 90 | 90 | | 30 | 20 | 20 | 20 | 25 | |
| 1 | 90 | 90 | 90 | 90 | | 31 | 20 | 25 | 25 | 20 | |
| 2 | 85 | 85 | 85 | 80 | | 32 | 15 | 15 | 15 | 15 | |
| 3 | 90 | 85 | 85 | 90 | | 33 | 15 | 15 | 15 | 35 | |
| 4 | 90 | 80 | 80 | 80 | | 34 | 40 | 40 | 45 | 45 | |
| 5 | 80 | 80 | 85 | 80 | | 35 | 45 | 45 | 45 | 40 | |
| 6 | 80 | 80 | 80 | 80 | | 36 | 45 | 40 | 35 | 35 | |
| 7 | 80 | 70 | 70 | 70 | | 37 | 35 | 35 | 35 | 30 | |
| 8 | 70 | 70 | 70 | 70 | | 38 | 30 | 20 | 20 | 20 | |
| 9 | 70 | 70 | 70 | 70 | | 39 | 20 | 20 | 20 | 20 | |
| 10 | 70 | 70 | 70 | 70 | | 40 | 25 | 25 | 25 | 25 | |
| 11 | 70 | 70 | 65 | 65 | | 41 | 20 | 20 | 20 | 20 | |
| 12 | 65 | 70 | 70 | 70 | | 42 | 20 | 20 | 20 | 20 | |
| 13 | 70 | 70 | 70 | 70 | | 43 | 25 | 20 | 20 | 20 | |
| 14 | 65 | 65 | 60 | 60 | | 44 | 20 | 20 | 20 | 20 | HEAVY WHITE EMISSION FROM THE ROOF MONITOR |
| 15 | 60 | 60 | 60 | 60 | | 45 | 25 | 25 | 25 | 30 | |
| 16 | 60 | 65 | 65 | 65 | | 46 | 40 | 80 | 80 | 80 | |
| 17 | 70 | 70 | 70 | 70 | | 47 | 70 | 70 | 70 | 70 | |
| 18 | 70 | 70 | 70 | 70 | | 48 | 70 | 70 | 70 | 70 | |
| 19 | 70 | 70 | 70 | 70 | | 49 | X | X | X | X | |
| 20 | 65 | 65 | 65 | 65 | | 50 | X | X | X | X | |
| 21 | 70 | 65 | 65 | 65 | | 51 | X | X | 70 | 70 | |
| 22 | 70 | 70 | 75 | 75 | | 52 | 70 | 70 | 70 | 70 | |
| 23 | 75 | 75 | 75 | 75 | | 53 | 70 | 60 | 65 | 60 | |
| 24 | 70 | 70 | 65 | 70 | HEAVY WHITE EMISSION FROM THE ROOF MONITOR | 54 | 60 | 65 | 65 | 60 | |
| 25 | 75 | 75 | 75 | 65 | | 55 | 65 | 65 | 65 | 65 | |
| 26 | 65 | 65 | 70 | 70 | | 56 | X | X | X | X | |
| 27 | 60 | 60 | 60 | 60 | | 57 | X | X | X | X | |
| 28 | 60 | 60 | 60 | 65 | | 58 | X | X | X | X | |
| 29 | 25 | 25 | 15 | 25 | | 59 | X | X | X | X | |

Observer's Signature

Basim Dihu

Last Certification Date

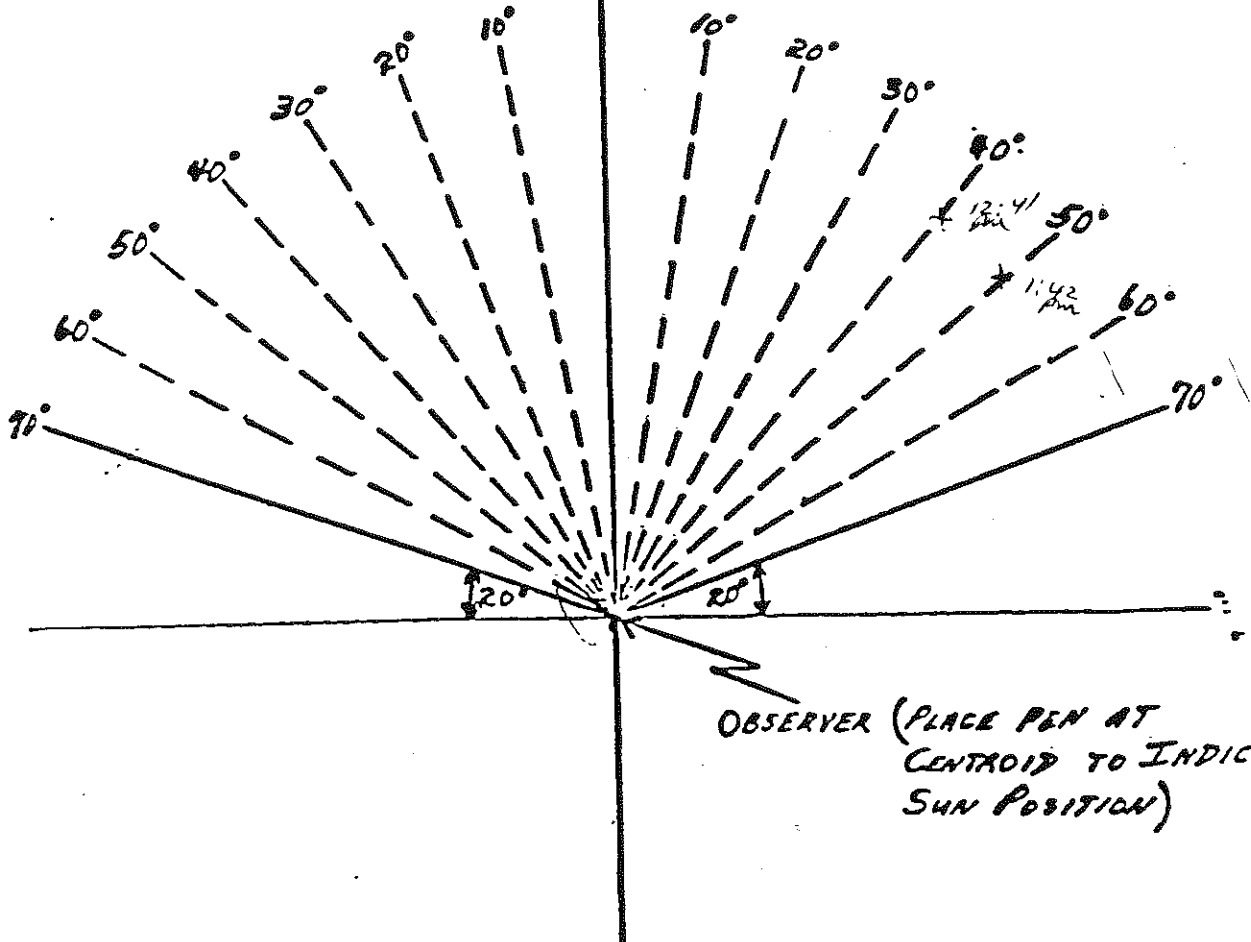
4-10-89

Observer's Affiliation

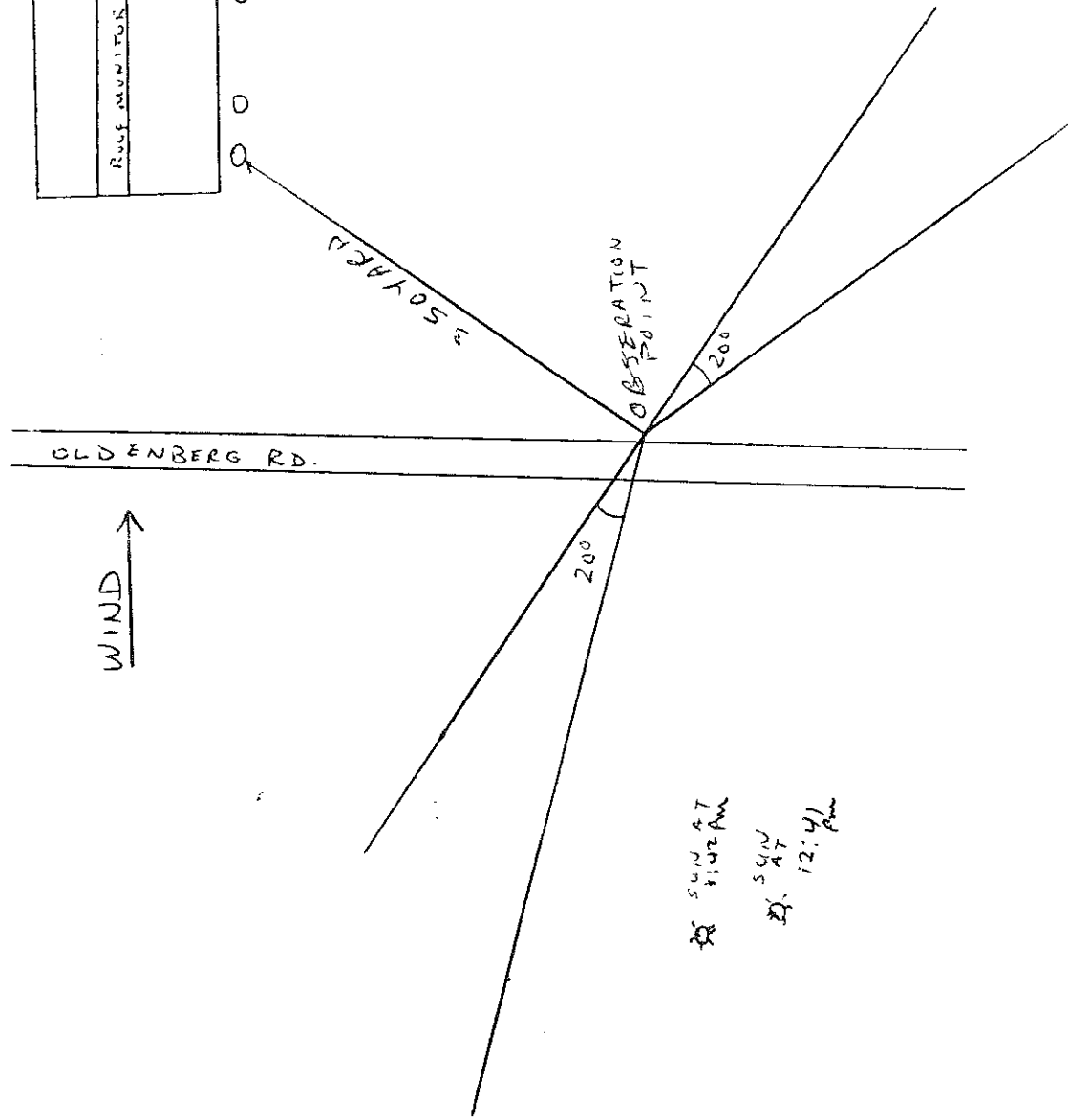
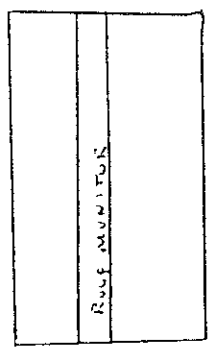
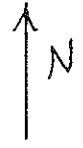
USEPA / CDO

AIM TOWARD
SOURCE

CHEMETCO
HARTFORD, ILL
9-28-89
Basin Ditch
The South Stack



OBSERVER (PLACE PEN AT
CENTROID TO INDICATE
SUN POSITION)



SUN AT 11:02 AM
SUN AT 12:41 PM

SUMMARY OF VISIBLE EMISSION OBSERVATIONS - USEPA, REGION V

Source Identification

Facility: CHEMETCO HARTFORD, ILL

Source: SECONDARY COPPER SMELTER - ROOF MONITOR EMISSIONS

Regulation: Illinois RULE 202 (b)

Evaluator's Report

On 9-28, 1989, visible emission evaluation began at 10:35 AM, and continued for 60 minutes.

SUMMARY OF READINGS

| Set Number | Time Start-End C T | Opacity Average | Readings | |
|------------|--------------------------|--------------------|-------------|------|
| | | | >30% to 60% | >60% |
| 1 | 10:35 AM - 10:41 AM | 78.5 | 0 | 24 |
| 2 | 10:41 AM - 10:47 AM | 61.04 | 11 | 13 |
| 3 | 10:47 AM - 10:53 AM | 45.00 | 24 | 0 |
| 4 | 10:53 AM - 10:59 AM | 42.08 | 20 | 0 |
| 5 | 10:59 AM - 11:05 AM | 3.96 | 0 | 0 |
| 6 | 11:05 AM - 11:11 AM | 25.42 | 1 | 4 |
| 7 | 11:11 AM - 11:17 AM | 19.79 | 0 | 0 |
| 8 | 11:17 AM - 11:23 AM | 41.25 | 0 | 7 |
| 9 | 11:23 AM - 11:29 AM | 95.21 | 0 | 24 |
| 10 | 11:29 AM - 11:35 AM | 63.75 | 9 | 15 |

Readings ranged from 0 to 100 % opacity.

Meteorological Conditions: Cloud Cover CLEAR.

Ambient Temperature 65 °F.

Evaluation Conditions: Excellent _____ Good ✓ Fair _____

Name and qualification of expert witness to attest to above:

Signature: Basim Dihu

Name: BASIM DIHU

Title: ENV. ENG.

Office: CDO

Date of Last Certification: 4-10-89

Initials of person who summarized data:

BD

VISIBLE EMISSIONS EVALUATION FORM - USEPA REGION V

Facility CHEMETCO

Date: 9-28-89

Observer: BASIM DIHU

HART FORD, ILL

Source: SECONDARY COPPER
SMELTER - ROOF
MONITOR EMISSIONS

Observation Point: OFF OF OLDENBERG
ROAD

Distance From: 350 YARD

Direction From: SE

Source Height: 80 FT

| | Initial | Final |
|------------------------|-------------------|-------|
| Wind Direction | <u>S</u> → | |
| Wind Speed | <u>2-7MPH</u> → | |
| Sky Condition | <u>CLEAR</u> → | |
| Background | <u>BLUE SKY</u> → | |
| Ambient Temperature °F | <u>65</u> → | |
| Humidity (high-low) | <u>MEDIUM</u> → | |
| Color of Emissions | <u>WHITE</u> → | |
| Reading Conditions | <u>GOOD</u> → | |

Plant Representatives:

NONE

State/Local Agency Representatives:

NONE

Observation

Began 10:35AM - Ended 11:35AM
(F T)

Remarks:

| Sec Min | 0 | 15 | 30 | 45 | Comments | Sec Min | 0 | 15 | 30 | 45 | Comments |
|------------|----|----|----|----|--------------------------|------------|-----|-----|-----|-----|------------------------------|
| 0 | 70 | 80 | 80 | 80 | EMISSIONS FROM NORTH | 30 | 5 | 5 | 5 | 5 | WHITE |
| 1 | 80 | 80 | 85 | 85 | SIDE OF THE ROOF MONITOR | 31 | 5 | 5 | 5 | 5 | |
| 2 | 90 | 90 | 90 | 90 | WHITE TO BROWN EMISSION | 32 | 5 | 5 | 5 | 5 | |
| 3 | 90 | 90 | 85 | 85 | | 33 | 5 | 5 | 5 | 5 | ↓ |
| 4 | 80 | 65 | 65 | 65 | | 34 | 10 | 10 | 10 | 90 | SOUTH TO MIDDLE MONITOR |
| 5 | 65 | 65 | 65 | 65 | | 35 | 90 | 90 | 80 | 60 | MIDDLE MONITOR |
| 6 | 70 | 65 | 65 | 65 | | 36 | 30 | 20 | 15 | 15 | |
| 7 | 65 | 65 | 65 | 65 | | 37 | 20 | 25 | 25 | 25 | SOUTH MONITOR WHITE TO BROWN |
| 8 | 60 | 60 | 60 | 65 | | 38 | 25 | 25 | 20 | 15 | |
| 9 | 65 | 65 | 65 | 65 | ↓ | 39 | 15 | 15 | 25 | 25 | |
| 10 | 60 | 60 | 60 | 55 | | 40 | 20 | 20 | 20 | 15 | |
| 11 | 50 | 50 | 50 | 50 | | 41 | 15 | 15 | 15 | 15 | |
| 12 | 60 | 50 | 50 | 45 | | 42 | 10 | 10 | 10 | 15 | |
| 13 | 45 | 45 | 45 | 45 | ↓ | 43 | 15 | 15 | 15 | 15 | |
| 14 | 50 | 50 | 45 | 45 | WHITE | 44 | 15 | 15 | 15 | 15 | ↓ |
| 15 | 40 | 40 | 40 | 40 | | 45 | 25 | 25 | 25 | 25 | |
| 16 | 40 | 40 | 40 | 45 | | 46 | 25 | 100 | 100 | 100 | NORTH WHITE TO YELLOW |
| 17 | 45 | 45 | 45 | 45 | | 47 | 100 | 100 | 100 | 100 | |
| 18 | 40 | 40 | 40 | 45 | ↓ | 48 | 100 | 100 | 100 | 100 | ↓ |
| 19 | 45 | 45 | 45 | 50 | WHITE | 49 | 100 | 100 | 100 | 100 | WHITE ↓ |
| 20 | 45 | 45 | 50 | 45 | NORTH | 50 | 100 | 100 | 100 | 100 | ↓ |
| 21 | 45 | 45 | 45 | 45 | side | 51 | 100 | 100 | 100 | 100 | |
| 22 | 50 | 50 | 50 | 45 | | 52 | 95 | 90 | 90 | 80 | |
| 23 | 30 | 25 | 25 | 20 | | 53 | 80 | 80 | 85 | 85 | |
| 24 | 15 | 5 | 5 | 0 | | 54 | 85 | 80 | 80 | 80 | ↓ |
| 25 | 0 | 0 | 0 | 0 | | 55 | 70 | 70 | 70 | 70 | ↓ |
| 26 | 0 | 0 | 5 | 5 | WHITE NORTH SIDE | 56 | 65 | 65 | 65 | 50 | ↓ |
| 27 | 5 | 5 | 5 | 5 | | 57 | 60 | 65 | 65 | 65 | ↓ |
| 28 | 5 | 5 | 5 | 5 | | 58 | 65 | 60 | 50 | 50 | |
| 29 | 5 | 5 | 5 | 5 | ↓ | 59 | 50 | 50 | 50 | 50 | |

Observer's Signature Basim Dihun

Last Certification Date 4-10-89

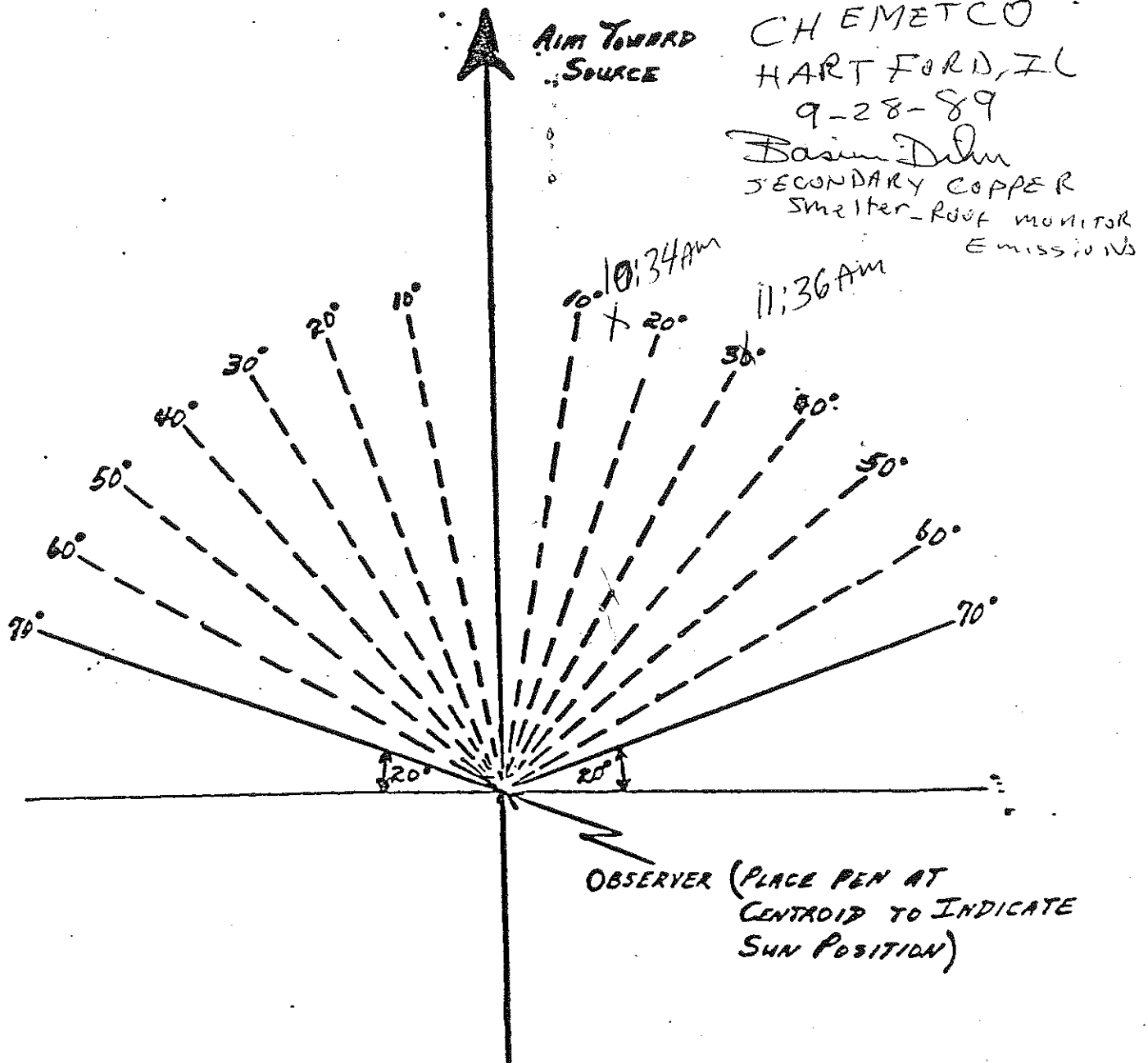
Observer's Affiliation USEPA / CDO

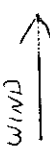
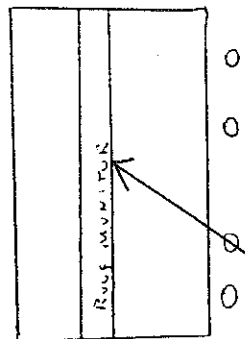
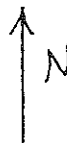
AIM TOWARD
SOURCE

CHEMETCO
HARTFORD, IL

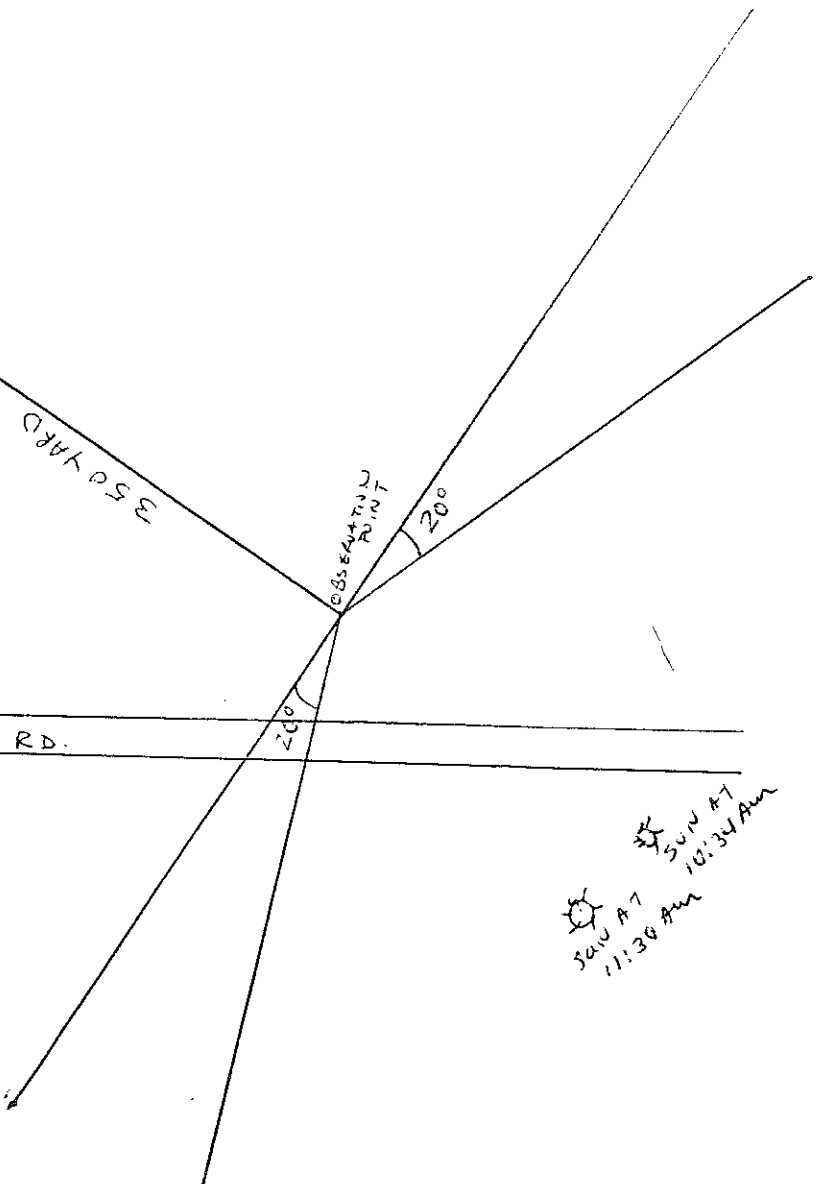
9-28-89

Basim Dilm
SECONDARY COPPER
Smelter-Roof monitor
Emissions





OLDENBERG RD.



SAW A7
11:30 AM
SAW A7
10:34 AM

ROUTE 3

CHEMETCO
HARTFORD, ILL

SUMMARY OF VISIBLE EMISSION OBSERVATIONS - USEPA, REGION V

Source Identification

Facility: CHEMETCO HARTFORD, FL

Source: SECONDARY COPPER SMELTER - THE NORTH STACK

Regulation: Illinois RULE 202 (b)

Evaluator's Report

On 9-28, 1989, visible emission evaluation began at 11:41 AM, and continued for 60 minutes.

SUMMARY OF READINGS

| Set Number | Time Start-End C T | Opacity Average | Readings | |
|------------|--------------------------|--------------------|-------------|------|
| | | | >30% to 60% | >60% |
| 1 | 11:41 AM - 11:47 AM | 49.29 | 21 | 0 |
| 2 | 11:47 AM - 11:53 AM | 49.58 | 0 | 4 |
| 3 | 11:53 AM - 11:59 AM | 80.00 | 0 | 2 |
| 4 | 11:59 AM - 12:05 PM | 80.00 | 0 | 24 |
| 5 | 12:05 PM - 12:11 PM | 77.08 | 0 | 24 |
| 6 | 12:11 PM - 12:17 PM | 30.42 | 0 | 8 |
| 7 | 12:17 PM - 12:23 PM | 71.67 | 0 | 20 |
| 8 | 12:23 PM - 12:29 PM | 16.88 | 0 | 0 |
| 9 | 12:29 PM - 12:35 PM | 8.96 | 0 | 0 |
| 10 | 12:35 PM - 12:41 PM | 3.86 | 0 | 0 |

Readings ranged from 0 to 90 % opacity.

Meteorological Conditions: Cloud Cover SCATTERED

Ambient Temperature 70 °F.

Evaluation Conditions: Excellent _____ Good ✓ Fair _____

Name and qualification of expert witness to attest to above:

Signature: Basim Dinu

Name: BASIM DINU

Title: ENV. ENG

Office: CDO

Date of Last Certification: 4-10-89

Initials of person who summarized data: BD

VISIBLE EMISSIONS EVALUATION FORM - USEPA REGION V

Facility CHEMETCO

Date: SEPT. 28, 1989

Observer: BASIM DIHU

HARTFORD, FL

Source: SECONDARY COPPER SMELTER - THE NORTH STACK

Observation Point: OFF OF OLDENBERG RD

Distance From: 350 YARD

Direction From: SE

Source Height: 85 FT

| | Initial | Final |
|----------------------------------|---------|-----------|
| Wind Direction <u>S</u> | | |
| Wind Speed <u>2-7 MPH</u> | | |
| sky Condition <u>SCATTERD</u> | | |
| Background <u>SKY (BLUE)</u> | | |
| Ambient Temperature °F <u>70</u> | | <u>70</u> |
| Humidity (high-low) | | |
| Color of Emissions <u>WHITE</u> | | |
| Reading Conditions <u>Good</u> | | |

Plant Representatives:

State/Local Agency Representatives:

Observation

Began 11:41 AM - Ended 12:41 PM
(F T)

Remarks: (*) EMISSIONS FROM THE ROOF MONITOR BLOCKED COVER THE STACK - BLOCKED MY VIEW

| Sec Min | 0 | 15 | 30 | 45 | Comments | Sec Min | 0 | 15 | 30 | 45 | Comments |
|------------|-----|-----|-----|-----|----------|------------|----|----|----|----|-----------------------|
| 0 | 45 | 45 | 50 | 45 | | 30 | 75 | 80 | 75 | 75 | |
| 1 | 55 | 45 | 45 | 45 | | 31 | 15 | 10 | 5 | 5 | |
| 2 | 45 | 45 | 50 | 55 | | 32 | 5 | 5 | 5 | 5 | |
| 3 | 55 | 50 | 55 | 55 | | 33 | 5 | 5 | 5 | 5 | |
| 4 | 50 | 50 | 50 | 50 | | 34 | 5 | 5 | 5 | 10 | |
| 5 | 50 | * | * | * | | 35 | 70 | 80 | 85 | 90 | |
| 6 | * | * | * | * | | 36 | 90 | 90 | 80 | 85 | |
| 7 | * | * | * | * | | 37 | 90 | 90 | 90 | 90 | |
| 8 | * | * | * | * | | 38 | 80 | 80 | 80 | 80 | |
| 9 | 20 | 25 | 25 | 25 | | 39 | 80 | 80 | 80 | 85 | |
| 10 | 25 | 25 | 25 | 25 | | 40 | 80 | 80 | 85 | 80 | |
| 11 | 100 | 100 | 100 | 100 | | 41 | 15 | 15 | 10 | 5 | |
| 12 | * | * | * | * | | 42 | 5 | 5 | 5 | 5 | |
| 13 | * | * | * | * | | 43 | 5 | 0 | 0 | 5 | |
| 14 | * | * | * | * | | 44 | 20 | 30 | 30 | 25 | |
| 15 | * | * | * | * | | 45 | 20 | 20 | 25 | 25 | |
| 16 | * | * | * | * | | 46 | 25 | 30 | 30 | 25 | |
| 17 | * | * | 80 | 80 | | 47 | 20 | 20 | 15 | 15 | |
| 18 | 80 | 80 | 80 | 75 | | 48 | 20 | 15 | 15 | 15 | |
| 19 | 75 | 80 | 75 | 75 | | 49 | 15 | 10 | 10 | 5 | |
| 20 | 75 | 75 | 80 | 80 | | 50 | 5 | 5 | 0 | 0 | |
| 21 | 80 | 80 | 80 | 80 | | 51 | 10 | 5 | 5 | 5 | |
| 22 | 80 | 85 | 85 | 85 | | 52 | 5 | 10 | 10 | 10 | |
| 23 | 85 | 85 | 85 | 80 | | 53 | 10 | 10 | 10 | 10 | Heavy Black Emission |
| 24 | 75 | 70 | 70 | 70 | | 54 | * | * | * | * | From the roof monitor |
| 25 | 70 | 70 | 70 | 75 | | 55 | * | * | 10 | 10 | |
| 26 | 80 | 80 | 80 | 80 | | 56 | 5 | 5 | 5 | 5 | |
| 27 | 75 | 75 | 80 | 80 | | 57 | 5 | 5 | 5 | 5 | |
| 28 | 85 | 85 | 80 | 80 | | 58 | 5 | 0 | 0 | 0 | |
| 29 | 80 | 80 | 80 | 80 | | 59 | 5 | 0 | 0 | 0 | |

Observer's Signature Basim Dih

Last Certification Date 4-10-89

Observer's Affiliation USEPA/CDO

AIM TOWARD
SOURCE

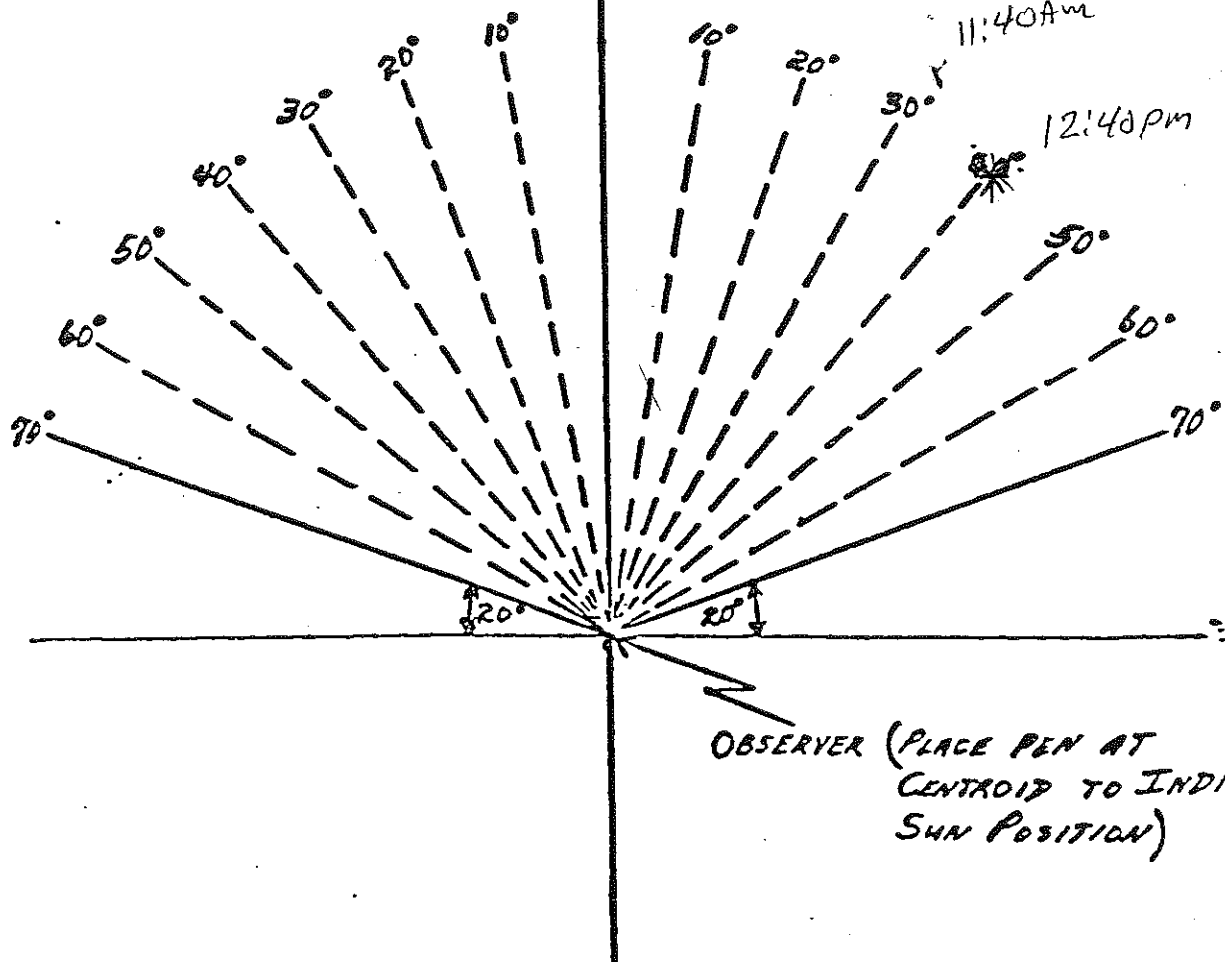
CHEMETCO
HARTFORD, ILL.

9-28-89

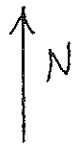
Basim Dahan
SECONDARY COPPER SMOelter
THE NORTH STACK

11:40 AM

12:40 PM



OBSERVER (PLACE PEN AT
CENTROID TO INDICATE
SUN POSITION)



| | | |
|--|--------------|--|
| | | |
| | ROOF MOUNTED | |
| | | |
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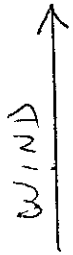
350 YARD

OBSERVATION
POINT

1200

OLD ENBERG RD.

200



WIND: 21
L4 NWS
WIND: 11
L4 NWS

ROUTE 3

CHEMETCO
HARTFORD, ILL

1:42:38 PM
FRIDAY
SEPTEMBER 29, 1985

| EVENT SUMMARY | | | | | | | | | |
|---|------|-----|---|---|---|---|--------|----------|--|
| 9/28 | HEAT | TYP | 4 | 2 | 1 | 3 | CHARGE | SLAG CFF | |
| 13:15 | 902 | SME | | | | | | | |
| 13:15 | 526 | SME | | | | | | | |
| 13:18 | 902 | SME | | | | | | | |
| 13:20 | 691 | BRZ | | | | | | | |
| 14:05 | 902 | SME | | | | | | | |
| 14:05 | 738 | REF | | | | | | | |
| 14:15 | 902 | SME | | | | | | | |
| 14:15 | 691 | BRZ | | | | | | | |
| 14:40 | 691 | BRZ | | | | | | | |
| 14:40 | 738 | REF | | | | | | | |
| 15:00 | 902 | SME | | | | | | | |
| 15:00 | 739 | REF | | | | | | | |
| 15:01 | 739 | REF | | | | | | | |
| 15:02 | 739 | REF | | | | | | | |
| 15:10 | 526 | SME | | | | | | | |
| 15:15 | 902 | SME | | | | | | | |
| 15:15 | 691 | BRZ | | | | | | | |
| 15:15 | 739 | REF | | | | | | | |
| FOR DETAIL | | | | | | | | | |
| PF4 - FCE 4 PF2 - FCE 2 PF1 - FCE 1 PF3 - FCE 3 | | | | | | | | | |

| 9/28 | HEAT | TYP | 4 | 2 | 1 | 3 |
|---|------|-----|---|---|-------------|-------------|
| 11:25 | 901 | SME | | | CHARGE | |
| 11:45 | 525 | BRZ | | | | TAP 2ND MTL |
| 11:46 | 525 | BRZ | | | | WRAP-UP |
| 11:50 | 901 | SME | | | SAMPLE SLAG | |
| 11:50 | 526 | SME | | | | CHARGE |
| 11:52 | 526 | SME | | | | CHARGE |
| 12:00 | 901 | SME | | | CHARGE | |
| 12:10 | 691 | BRZ | | | | |
| 12:15 | 738 | REF | | | CHARGE | |
| 12:25 | 901 | SME | | | | |
| 12:25 | 738 | REF | | | SAMPLE SLAG | |
| 12:30 | 691 | BRZ | | | | |
| 12:45 | 901 | SME | | | SLAG CFF | |
| 12:45 | 738 | REF | | | | |
| 13:00 | 901 | SME | | | TAP BLK CL | |
| 13:00 | 691 | BRZ | | | | |
| 13:10 | 526 | SME | | | CHARGE | METAL TRANS |
| 13:15 | 902 | SME | | | | |
| FOR DETAIL | | | | | | |
| PF4 - FCE 4 PF2 - FCE 2 PF1 - FCE 1 PF3 - FCE 3 | | | | | | |

WORKSTATION 195 - USER MLR - REZNACK, MICHELLE 215CRH

2:04:37 PM FRIDAY SEPTEMBER 29, 1989

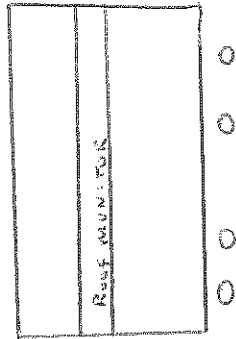
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*****1*****2*****3*****4*****5*****6*****7*****8*****
***123456789012345678901234567890123456789012345678901234567890
*****
*
*1*DATE 9/26/89 CHEMETCO ENVIRONMENTAL MANAGEMENT
*2*REPORT B UPSET CONDITION REPORT
*3*
*4*DEPARTMENT FOUNDRY EQUIPMENT/LOCATION A1 AAF FAN
*5*
*6*DATE BEGAN 92889 TIME BEGAN 1130 DATE END 92889 TIME END 1430
*7*DAYS HRS MIN
*8*DURATION 3 QUANTITY OF EMISSIONS MINIMAL
*9*
*10*NATURE OF EMISSIONS SLAG REDUCTION
*1*
*2*MALFUNCTION #1 AAF
*3*
*4*CAUSE INEORD BEARING OVERHEATED
*5*
*6*CORRECTIVE ACTIONS REPLAIN FAN AND ADDED CIL
*7*
*8*MITIGATING ACTION TAKEN REDUCED FIRING RATES TO MINIMIZE SMOKE
*9*
*20*COMMENTS
*1*REPORT BY RCY
*2*
*3*
*4*
*
*
*****PRESS ENTER KEY TO PAGE, PF 14 TO EXIT*****
*****1*****2*****3*****4*****5*****6*****7*****8*****
***123456789012345678901234567890123456789012345678901234567890
*****
```


1:42:53 PM FRIDAY SEPTEMBER 29, 1966

[illegible]

| | | |
|--|---------------|--|
| | Roof material | |
| | | |
| | | |

$N \downarrow$



OLD ENBERG RD.

ROUTE 3

CHEMETCO
HARTFORD, ILL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: SEP 20 1989

SUBJECT: Chemetco Plant, Hartford, Illinois

FROM: John T. Gaitskill, Environmental Engineer *JTG*

File

TO:

Thru: George Czerniak *JC*

This report describes my visit of June 20, 1989, to the secondary copper smelter operations at the subject facility. My host at the plant was Michelle Reznack, Environmental Manager. The visit was for familiarization with the operations in light of reports of high opacities from the plant.

Process Description

This is a one-of-a-kind process in the United States. Copper bearing scrap is refined to 99% pure copper which is cast in 700 pound slabs and sold as anodes to electrolytic copper plants. The exact process is considered to be a trade secret, and a more complete description can be found in confidential documents submitted by the company.

Copper bearing scrap such as radiators, brass piping, and wire are delivered by truck, rail and barge. Once on the premises the scrap is transferred with front end loaders and cranes for processing. Chemetco uses 4 rotating furnaces for copper production. Heat for these furnaces is from natural gas firing. Smelting involves heat with chemical treatment of the scrap to produce molten copper with non-copper material forming a slag layer. The copper is 85-93% pure. Refining then occurs making 99% pure copper by oxidizing out zinc and other impurities. The molten copper is poured for casting into slabs weighing 700 pounds approximately 6 inches thick, 2 feet by 3 feet.

Pollution Concerns

Particulate is the criteria pollutant of concern from this operation. These emissions are generated from several sources. Fugitive dust occurs from material handling traffic. In addition, particulate matter is generated from the furnaces by the burning of insulation on wire and oils and other coatings on scrap. The smelting process generates particulate matter by utilizing large volumes of air to oxidize zinc, and other undesirables in the scrap.

Each of the furnaces is controlled by direct aspiration to its respective wet scrubber for particulate removal. Two of the furnaces also are controlled by common baghouse.

During my visit no tapping or charging could be observed. Furnace #3 was being repaired and required exclusive use of the crane which is needed for moving furnaces during tapping and charging. The smelting and refining processes can be put on hold indefinitely without impairing the product.

Follow-up inspections by CDO to observe these activities will be scheduled.

cc: Penson

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SEP 20 1989

SUBJECT:

Chemetco Plant, Hartford, Illinois

FROM:

John T. Gaitskill, Environmental Engineer

TO:

File

Thru: George Czerniak

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cc: Person

Document Subject

Chemetro Plant

Reviewer

Initials

Date

Typist Name

F. Honore

KA

9-19-89

Originator(s) Name(s)

Gartshill

JH

19 Sept 89

Reviewers

Unit Chief

Section Secretary

Section Chief

JC

9/19/89

Branch Secretary

Branch Chief

Division Secretary

Division Director



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
Division of Air Pollution Control--Field Operations Section

MEMORANDUM

DATE: January 14, 1988 Date of Inspection: August 19, 1987
TO: Miles Zamco I.D. #: 119 801 AAC
FROM: Jeff Benbenek Region/District: 302
SUBJECT: Facility: Chemetco SIC 3341
Address: Route 3 & Oldenberg Road, Hartford, IL 62048
Contact/Title: Gary Roberts/Supt. of Operations Phone: 618/254-4381

Facility Description

This facility is primarily engaged in the secondary smelting and refining of copper from copper-bearing scrap metal, drosses, and residues.

The primary product is a 99+ copper casting, referred to as an anode. The raw materials referred to above are smelted and refined in a "four-step process", with these steps being smelting, refining, slag treatment, and slag recovery. Four rotary reverberatory furnaces, (nos. 1-4) known as "Kaldo" converters, are used to accomplish these steps. These natural gas-fired (rated @ 18.9×10^6 Btu/hr.), 70 ton furnaces are interchangeable in that they are identical and can perform each step of this process. According to previous permit applications submitted by this facility, the maximum rate of copper production is 165 tons/day for a 24-hour operating day. According to previous permit applications, the typical process weight rate and operating hours for each step, to produce this amount of copper, can be summarized as follows:

| <u>Step</u> | <u>P.W.R. (lbs/hr.)</u> | <u>Hours/Day</u> |
|----------------|-------------------------|------------------|
| Smelting | 15,720 | 42 |
| Refining | 27,730 | 14 |
| Slag Treatment | 15,469 | 16 |
| Slag Recovery | 11,000 | 24 |

The refining step produces the copper which is then transferred for final fire refining in a 200 ton, natural gas fired anode furnace. The rated heat input to this furnace is 49.6×10^6 Btu/hr. The copper anodes are cast from this furnace.

In the slag treatment step, based on the type of raw materials being smelted, a mixture of copper, lead, and tin mixture accumulates. This mixture is transferred to a shaker ladle for separation of the lead-tin alloy from the copper and other materials. The lead-tin alloy is cast into buttons, which is the product. The copper containing mixture is transferred back to the smelting step. This source is not fired by any type of fuel.

Based on AP-42, Section 7.9, particulates are the criteria pollutant of concern in secondary copper smelting and refining. Each of the four converters are equipped with an A.A.F. scrubber system for control of particulates generated during the process mode. These systems are identical and each consist of a quencher, venturi scrubber, and mist eliminator. The maximum pressure drop across the venturi scrubber is 50" H₂O. The primary hood on each system for capturing these process emissions is referred to as a

"snorkel" hood. It is designed to fit over the mouth of the converter for direct evacuation.

For control during charging, each furnace is equipped with low canopy hoods. On converters #1 and #3, the charging hoods are evacuated to two cyclones for primary control and then to two ITK baghouses for secondary control. The charging hoods on #2 and #4 are evacuated to their respective scrubber systems. Booster fans are used to increase draft on the #2 and #4 systems.

For control during tapping, converters #1 and #3, again, use the cyclones and baghouses. Low canopy hoods are utilized. On each of the other two converters, a tapping enclosure is used with a slotted hood at the center which is also evacuated to the scrubber system. Again booster fans are used in these two systems. Particulate emissions from the shaker ladle are also controlled by the cyclone-baghouse systems. Capture is accomplished with the use of a low canopy hood.

The final slag from the smelting and refining process is quenched with water in order to fracture it and it is then screened prior to shipment by rail from the facility. The screen is of the single-deck type and, since water is used in the fracturing process, there is no further control on this source. Fines from the screen are used to line the slag pots.

Steam is provided at the facility by two identical York-Shipley boilers. Fired on natural gas, the rated heat input for each of these boilers is 25.7×10^6 Btu/hr. There is no fuel oil standby system on these sources.

It should also be noted that there is no fuel oil capability on the converters or the anode furnace.

Findings

The total time of this plant visit was from 1010 hours to 1440 hours.

After I arrived at the facility, I met with Mr. Roberts and the manager of operations, Mr. David Hoff.

I reviewed the emission inventory with them and requested that they provide me with data on the current production rate of the facility. Mr. Hoff indicated that he would get that information and get back in touch with me concerning it. With regard to changes in sources or control equipment, they informed me that the cyclones and baghouses, for which they received a construction permit (#86040033) on September 2, 1986, have been constructed and are currently in use on converters #1 and #3.

After this discussion, Mr. Roberts and I toured the facility. I noted that the unpaved roadways were being sprayed and a sweeper was being used on the paved traffic areas. Water guns were being used to spray the raw material storage area.

The spare charging hood was on site and it was in good condition. The facility had agreed to keep a spare hood available in response to a Compliance Inquiry Letter in 1986. Mr. Roberts indicated that that hood would be replacing the one on the #2 converter the next day.

We next went to the slag screening area. All final slag produced from the smelting and refining process is transferred to this area where it is first fractured with water and then screened. The fracturing tank and water storage tank have both been fashioned out of a river-going barge. The fractured slag is transferred to a single deck screen for separation. The oversize is sold and the fines are used to line slag pots. I noted that there were water nozzles stationed over the screen, however, Mr. Roberts indicated that they did not work. The construction and operation of the screen indicates apparent violations of 35 Ill. Adm. Codes 201.142 and 201.143 of the Regulations, since no construction or operating permit applications were submitted for this source. It should be noted that it was not in operation at the time of the plant visit.

We proceeded to the location of the cyclones and baghouses. I asked Mr. Roberts when this equipment began operation and he responded that he did not know exactly, but it was either in late March or early April of 1987. All units were in operation. There are magnehelics on each of the two baghouses. The East had a pressure drop of 5" H₂O, while the West side was at 3" H₂O. No visible emissions were observed from the exhaust stacks, however, it was not known at the time of that observation if any charging or tapping was taking place in the foundry. There were no visible emissions from the foundry building roof monitor. The ductwork and external structure of these pieces of control equipment were in very good condition. Collected dust is screw conveyed to drums in an enclosed fashion. There was no evidence of any spillage.

At the time of the visit, converters #1 and #2 were in operation. Their respective scrubber control systems were operating as well. The #1 venturi was showing a pressure drop of 44" H₂O. Two pumps were supplying scrubbant to the system with gauges showing 50 lbs. of pressure on the outlets of each. There were no leaks in the piping leading to the venturi. Ductwork was in good condition. There were very light white visible emissions from its exhaust stack. On the #2 control system, the pressure drop was 42" H₂O across the venturi. Again, two scrubbant pumps were being operated with outlet pressures of 58 lbs. and 70 lbs. No leaks were noted from the piping to its venturi. Very light emissions were presented from its stack also. Ductwork was in good condition on this system as well. Mr. Roberts indicated that the venturi nozzles are manually cleaned each shift.

Inside the foundry, I was informed that the #1 converter was in the slag treatment mode, while #2 was refining. 59 tons of material was being processed in the #1 and 80.5 tons was in the #2. I took the following information from monitors in the pulpit:

| <u>Furnace #</u> | <u>Blower RPM</u> | <u>Motor Amps</u> <u>(A.C.)</u> | <u>Natural Gas Flow</u> <u>(cfm)</u> | <u>Oxygen Flow</u> <u>(cfm)</u> |
|------------------|-------------------|------------------------------------|---|------------------------------------|
| 1 | 1467 | 38 | 0 | 0 |
| 2 | 1369 | 48 | 213 | 564 |

The #3 converter was idle at the time, but was to be charged for smelting later in the day. #4 was down for rebricking. Mr. Roberts indicated that the converters can be operated for eight months between rebrickings. The shaker ladle was not in operation either and Mr. Roberts informed me that it is normally utilized 1-1/2 hours each shift.

I verified by observation that the #1 and #3 converters' charging and tapping hoods are connected to the cyclones-baghouses. The location of the low canopy hoods for tapping require that these furnaces be tilted toward the charge side of the furnaces for tapping. The #2 and #4 converters tilt in the opposite direction for tapping since that is the location of their enclosures. Ductwork to the primary charging, and tapping hoods was all in good condition. There was minimal leakage of particulates from the primary hoods on #1 and #2. I noted that the charging hood on the #2 converter was in poor condition, especially the top lip. Mr. Roberts reiterated that it would be replaced the next day. According to him, the hood was struck over the weekend by the charging bucket. No charging or tapping took place while I was at the plant, so I could not make any judgment as to the effectiveness of any of the secondary hoods. Anodes were being cast and particulate emissions from the casting wheel were negligible. The same can be said for the anode furnace. Neither of the boilers were operating during the inspection.

After the tour, I reviewed records kept by the facility concerning malfunctions and scrubber parameters.

Records on malfunctions/breakdowns were reviewed from March 1, 1987 to the date of the visit. The day before, while I was driving to another facility in the area, I observed heavy roof monitor emissions from Chemetco. A review of these records showed that they had had a malfunction of the fan on the #3 scrubber system during the same time period. 25,100 pounds of tin cans were charged to that #3 converter during that period. I discussed reporting requirements with Mr. Hoff, Mr. Roberts, and the superintendent of maintenance, Syd Campbell. If the PCB order, 83-2, is still valid, then the facility is required to follow their previously granted operating permit #72090064. The special condition of this permit required that the Agency be immediately notified upon a malfunction/breakdown and that a report be submitted to FOS within five days. There have been delays in getting the written reports and in one instance, no telephone notification or written report was received (May 13, 1987).

I reviewed the records kept of control equipment parameters. Once per shift, the blower motor amperage, pressure drop across the venturi, and scrubbant pump pressure are recorded for each scrubber system. I went back to July 1, 1987 on these records. There was no great deviation in the numbers as recorded. The motor amperage was remained around 40 A.C. amperes. Venturi scrubber pressure drop was in the range of 40-50" H₂O and the pump outlet pressure ranged from 50-60 lbs.

I then informed Mr. Hoff that the Agency's Enforcement Services Section was reviewing the aforementioned Board Order to determine its bearing on permit requirements for the #1-#4 converters and their control systems. If it was determined that that Order did not exempt them from 35 Ill. Adm. Codes 201.143 and 201.144, then it would be included with the Compliance Inquiry Letter being sent due to the lack of permits for the slag screening process.

With regards to particulate emissions, compliance status could not be determined, based on this visit, due to the lack of converter charging or tapping. Follow-up observations would and will be conducted.

With the possibility that the cyclones-baghouses will be connected to the secondary hoods on the #2 and #4 converters, there is no need to update the T.A.S. until that occurs.

JJB:pbo/0061A

cc: DAPC Collinsville ✓

Engineer SILVA
Date Prepared 7/15/77

PART I

APPROVED: Chief
Engineering Investigation
Section SA
Date approved 7-15-77

I. Source Identification

A. Name: CHEMETCO

B. Address: OLDENBERG ROAD AND ROUTE 3
HARTFORD, ILLINOIS 62408

C. Air Quality Control Region: REGION 70 METROPOLITAN ST. LOUIS INTERSTATE

D. Attainment or Non-attainment Area: NON - ATTAINMENT
(MADISON COUNTY)

E. Pollutants: SO₂, PARTICULATES

F. Type of Operation: PRIMARY COPPER SMELTER, DOUBLE CONTACT
SULFURIC ACID PLANT

G. Point Source in Violation:

| II. Total Emissions (each pollutant in tons/year) | <u>Present</u> | <u>After Compliance Ach.</u> |
|---|----------------------|------------------------------|
| <u>SO₂</u> | <u>384 tons/year</u> | |
| <u>TSP</u> | | |

III. Federal Contacts with Source: (dates and main points of discussion)

IV. Status of Local and State Enforcement Actions:

7/15/77

V. Notice of Violation to be sent to:

Source: (Headquarters and Plant)

CHEMETCO
PLANT : OLDENBERG ROUTE AND ROUTE 3
HARTFORD, ILLINOIS 62048

HEADQUARTERS: DENIS FERON, PRESIDENT
CHEMETCO
P.O. BOX 187
ALTON, ILLINOIS 62002

State:

Gary Melvin, Manager
Div. of Air Pollution Control
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
2200 CHURCHILL ROAD
SPRINGFIELD, IL 62706

Local:

PART II

DATA TO SUPPORT VIOLATIONS AND DESIRED ABATEMENT ACTION

(Fill out separate Part II for each point source)

- I. Specific point source in violation:
[redacted]
- II. Regulation(s) or compliance schedule violated by point source
(be specific)
FAILURE TO PROPOSE EMISSION OFFSETS - 40 CFR PART 51.18
41 FR 55524 PART IV Condition 3
12/24/76
- III. Evidence supporting violation:

| A. | Emission Factors | Calculated Present Emissions | Allowed Emissions |
|----|------------------|------------------------------------|----------------------|
| | | [redacted] | 4.0 lb/ton |

Names of individuals who can testify to the above information:

G. SILVA

- B. Smoke readings for this point source:

| <u>Source</u> | <u>Date</u> | <u>No.</u> | <u>No. in Violation</u> |
|---------------|-------------|------------|-------------------------|
|---------------|-------------|------------|-------------------------|

Names of individuals who can testify to the above information:

C. Stack sampling of this point source:

I. Description of stack sampling evidence:

2. Names of individuals who can testify to the above information:

D. Evidence indicating missed increment, if applicable:

IV. Identify and explain any factors which may affect the persuasive impact of the evidence:

V. Contacts with State and local Agencies (their attitude toward Federal action):

- VI. Abatement action(s) which could be taken and a tentative schedule to achieve compliance:

Increments

Proposed types of control

- I. Submit final compliance plans.
2. Award contract for the control device.
3. Initiate on-site construction and installation of control device.
4. Complete on-site construction and installation of control device.
5. Achieve final compliance.
6. Submit test data.

- VII. If the source has proposed an alternative course of action to the one described above, describe and evaluate the proposed alternative, (attach copy of proposal if available):

Facility CHEMETCO Date _____
 Location OLDENBERG ROAD 0 ROUTE 3
HARTFORD, IL 62408 (MADISON COUNTY) Engineer J. VA
 State ILLINOIS
 Source PRIMARY COPPER SMELTER Sheet _____ of _____
 Pollutant SO₂ Regulation NSPS

I. Production Rate
 (Show lb/hr, ton/yr, and reference) from § 114 info
 FEED 23,920 lb/hr
 PRODUCT 8000 lb/hr black Cu
 Slag 1b/hr 9885
 H₂SO₄ - 220 tons/day - 18,393 lb/hr

II. Emission Factor
 (Show reference or show calculation)

III. Actual Emission Rate
 (Calculate worst case. Also indicate any stack test results or company data.
 Show in units of regulation, e.g. lb/10⁶ btu, as well as lb/hr & ton/yr)
 AS PER § 114 information submitted
 SO₂ - 384 tons/year - 92.6 lb/hr @ 180° and 14383 CFM

$$\frac{92.6 \text{ lb/hr}}{64 \text{ lb/mole}} \times 386.7 \frac{\text{ft}^3}{\text{mole}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times 10^6 = 782.9 \text{ ppm} = 0.078 \%$$

$$14,383 \left(\frac{460+70}{460+180} \right) \text{ SCFM}$$

IV. Allowed Emission Rate
 (Calculate worst case. Also indicate any stack test results or company data.
 Show in units of regulation, e.g. lb/10⁶ btu, as well as lb/hr & ton/yr)
 ROASTER - SO₂ - 0.065 %

Uncertain must await performance test

V. Compliance Status

Facility CHEMETCO
Location OLDENBERG AND ROUT 3
HARTFORD, IL 62408
State ILLINOIS
Source PRIMARY COPPER SMELTER (DRYER)
Pollutant PARTICULATE

Date _____
Engineer SI-VA
Sheet _____ of _____
Regulation NSPS

I. Production Rate

(Show lb/hr, ton/yr, and reference) § 114 info

FEED

23,920 lb/hr

Product

8000 lb/hr - Black Cu

9885 lb/hr - slag

220 tons/day - 18,333 lb/hr - H₂SO₄

II. Emission Factor
(Show reference or show calculation)

III. Actual Emission Rate
(Calculate worst case. Also indicate any stack test results or company data.
Show in units of regulation, e.g. lb/10⁶ btu, as well as lb/hr & ton/yr)

IV. Allowed Emission Rate
(Calculate worst case. Also indicate any stack test results or company data.
Show in units of regulation, e.g. lb/10⁶ btu, as well as lb/hr & ton/yr)

DRYER - PARTICULATE - 0.022 gr/dscf

V. Compliance Status